

COUNTRY LIFE

VOL. XVII.—No. 438.

[REGISTERED AT THE
G.P.O. AS A NEWSPAPER.]

SATURDAY, MAY 27th. 1905.

[PRICE SIXPENCE,
BY POST, 6½d.]



From a Portrait by

MISS NANCY BORWICK.

M. PAUL C. HELLEU.



THE Journal for all interested in

Country Life and Country Pursuits

CONTENTS.

	PAGE
<i>Our Portrait Illustration: Miss Nancy Borwick</i>	721, 722
<i>The Triumphs of Medicine</i>	722
<i>Country Notes</i>	723
<i>The Advantage of Waterways. (Illustrated)</i>	725
<i>An Ancient Fish-pond</i>	727
<i>The Eyes of Insects. (Illustrated)</i>	728
<i>A Glade in Spring</i>	729
<i>Town Clocks. (Illustrated)</i>	731
<i>The Failure of Lobster-hatching</i>	734
<i>Little Tern. (Illustrated)</i>	735
<i>In the Garden. (Illustrated)</i>	737
<i>The Gardens of Italy: The Villa Albani—I. (Illustrated)</i>	738
<i>A Book of the Week</i>	748
<i>Our Wild Singing Birds. (Illustrated)</i>	749
<i>Arrangement of Cut Flowers</i>	751
<i>The Forest Reptile in England. (Illustrated)</i>	752
<i>From the Farms. (Illustrated)</i>	753
<i>Correspondence</i>	755

EDITORIAL NOTICE.

The Editor will be glad to consider any MSS., photographs, or sketches submitted to him, but they should be accompanied with stamped addressed envelopes for return if unsuitable. In case of loss or injury he cannot hold himself responsible for MSS., photographs, or sketches, and publication in COUNTRY LIFE can alone be taken as evidence of acceptance. The name and address of the owner should be placed on the back of all pictures and MSS.

Those who send photographs are requested to state the price required for reproduction, otherwise when payment is requested it will be made at the usual rates of the journal. Only the actual photographer or owner of the copyright can be treated with.

THE TRIUMPHS OF MEDICINE.

ON Monday night the Prince of Wales made an excellent speech at the centenary meeting of the Royal Medical and Chirurgical Society of London. Briefly, and yet eloquently, he passed in review the enormous changes that have taken place in medical science during the last hundred years. They are so great that it is difficult now to realise what must have been the condition of our forefathers in this respect. Let anyone fancy himself in the cockpit of Nelson's ship after the Battle of Trafalgar, and he will form some idea of the torture from which people have escaped. First, there was Sir Walter Simpson's discovery of the use of chloroform. Before that time, every surgical operation was performed while the patient was fully awake and alive, and many operations were rendered absolutely impossible owing to the fright and nervousness caused by the sight of the knife and the fear of pain. In the second place, Lord Lister, discoverer of the antiseptic treatment, broke quite new ground in medical science. Before the antiseptic treatment was known, a compound fracture practically meant the loss of a limb. If amputation were not resorted to at once, inflammation was set up, and in ninety-nine cases out of a hundred the sufferer died in agony from what was called mortification. The scientific study of the human frame was barred by the impossibility of carrying out certain operations, which have become quite common and safe now.

To-day there is scarcely a portion of the human anatomy that has not been explored by the surgeon, and not only the internal organs of the body, but the brain itself has been laid bare and treated in a manner that the doctor of a hundred years ago would have thought it madness to attempt. Nor is this all. We must add a third to the list of great discoverers, and the third is Monsieur Pasteur, who laid the foundation of that study of bacteriology which has opened so enormous a field to research. If you would see the monument to Monsieur Pasteur, it is only necessary to look around. Hundreds of diseases have been analysed as to their causes, the true nature of infection has been

laid bare, and it has become possible to take measures to prevent it, while the system of inoculation with cultures from the worst diseases has developed a perfectly new kind of medical practice. Even the more efficient sanitation, both in town and village, is in a large measure due to these discoveries, and the medical profession may well look back with pride over the hundred years which the Prince of Wales passed in review on Monday night. We are inevitably led by the survey of His Royal Highness to consider what is to be the future of the science whose progress he recounted. In the opinion of the best physicians of the day it is undergoing a complete revolution. The old idea was simply one of cure, and from time immemorial the idea of quackery entered a great deal into the popular conception of a doctor who was in consequence compelled to resort to a certain mystery in his calling. We can understand that from the endless mockery poured upon the profession in mediæval literature, especially by the wittiest of the French writers, Le Sage and Molière. Who does not remember the inimitable pictures both of them drew of the quack salvers of their time, and we have but to turn to Fielding and Smollett to find the same ideas prevalent in England. For the matter of that, we had them revived by Charles Dickens as late as the nineteenth century. At the present day there are patients who would not think the leech had done them justice unless he prescribed some pill, draught, or potion, whereas, in nine cases out of ten, what is wanted is not so much a medicine as attention to diet and to the other conditions that govern health. The changes noted have dignified not only the calling of medicine, but also the men who follow it. A great specialist of to-day never dreams of affecting the airs of one who holds the secret of a great mystery. He talks to his patient in the most common-sense manner, and is not at all afraid to tell him that medicine can do no good, that the only prescription he has to offer is the suggestion of a more wholesome diet and more life in the open air.

The doctor of the future is much more likely to devote his attention to preventative than to curative measures. He will be paid to see that people live in hygienic surroundings, that no drains are permitted which can at the same time generate poisonous gas and enable it to escape, that every individual enjoys a due amount of fresh air, that people are clothed properly, and that they use an intelligent choice in the matter of diet. The ideal to be aimed at is the elimination of disease, or at least the reduction of it to a minimum, so that at the end people die naturally of old age; and it need not be denied that some of the deepest students of the present day dream of a time when old age itself, though it cannot be averted, will be put off to a more distant date. The researches of Professor Menschikoff have this for their object, and though it is hopeless to expect that he, any more than the old astrologists, will find out the secret of immortality, yet he is in the way of making discoveries which will be still further advanced by the physicians of the future. The best reasons for believing that medicine will be preventative in the future are to be found in what has been already accomplished, and in this matter our country readers must be even more interested than those in the town. For many will remember, and if they do not remember others will have told them, how villages and hamlets used to be scourged by every species of epidemics and diseases. There was scarcely a year in the early part of last century that did not witness an outbreak in the village of small-pox, diphtheria, scarlet fever, typhus, or some other equally foul disease. Cases of this kind have become much rarer than they used to be, not altogether owing to the application of medicine, but to the greater care that is bestowed in keeping the surroundings of people wholesome and healthy. In the old English village, and much more so in the old Scotch village, not the slightest attention was paid to the laws of health. There can be no reason to doubt that the bad scavenging, the lack of drainage, and the pollution of the water were answerable for the spread of many epidemic diseases; we have seen, at any rate, that since these matters were attended to, the health of the villagers has improved in a most wonderful manner. It is the same with the town. Not till about the year 1870 was this question of hygiene attended to as it deserved, and many practices that would appear almost incredible now were looked upon as inevitable then. It is to the medical officer of health that we directly owe the improvement that has taken place, and he has drawn his inspiration from those great masters of his craft who are ever striving and studying to advance and improve medical science.

Our Portrait Illustration.

OUR frontispiece this week is a portrait of Miss Nancy Borwick, the daughter of Sir Robert Hudson Borwick of Eden Lacey, Lazonby, Cumberland. We regret that the children in our frontispiece last week were described as the daughters of Mr. Gerald Buxton, whereas they are the daughters of Mrs. Geoffrey Buxton of Dunston Hall, Norwich.



ONE of the most characteristic features of the war in the East is the almost absolute silence in which the preparations for battle are being conducted. Everybody is of opinion that the gravest events are impending both by sea and by land, yet only vague rumour has arrived in this country about them. The one piece of news that seems to be authenticated is that Admiral Rozhdestvensky is so ill that he has had to be superseded, the disease from which he is suffering being described as a breakdown of nerves. That this should be the case is not to be wondered at, for the strain upon him during the last six months must have been terrible. Surely never had man cause to regret illness more. There is every reason to expect that the great naval battle in the Far East will be an event not in Russian history nor in Japanese history only, but in the history of the world, and there are many sailors who would give the rest of their lives to be in it; much more to be one of the leaders.

As far as we can see, the prospects of peace are still as remote as ever. The Japanese Minister at Paris has declared, with the authority belonging to his years and office, that Japan will impose her own conditions, and that these include the entire evacuation of Manchuria by Russia, the reduction of Vladivostock to the condition of a trading unfortified seaport town, and the payment of an indemnity. But evidently Russia is in no temper to comply with these demands. On the contrary, her rulers seem only to be rendered more sanguine by misfortune. They say that the army in the field has been so greatly strengthened as to be now more than a match for the enemy, while the fleet at sea is considered to be at least equal to that commanded by Admiral Togo. If this is the genuine feeling in Russian circles, it is clear that a great event will have to occur before peace negotiations can be begun with any chance of being carried to a successful conclusion. Meantime there is rebellion scarcely veiled in the domestic affairs of Russia, and no one can tell how soon that unhappy country may be plunged into the middle of a revolution.

An important article appeared in *The Times* the other day on the Press as an intelligence agent in time of war, and this subject deserves the earnest attention of the British Government. However thorough our preparations in the way both of fleet and army may be, we run the risk of their being in vain unless some degree of secrecy can be maintained, and how to do this is a question that would have to be very carefully considered. The Japanese solved the problem in their own way by making an appeal to the various editors of newspapers, asking them out of patriotism to refrain from printing anything that would give the enemy information. We are afraid, however, that the Press of this country would not follow the excellent example set by their Oriental brethren. Our newspapers are so much divided in opinion that, although the great majority of those engaged on them are fully as patriotic as any Japanese, yet there are always some who are in opposition. If a war begins, their tendency is to oppose it, and our experience in South Africa showed that a few were openly on the side of the enemy. Then, again, our traditions in favour of the liberty of the Press are of so long standing that coercion is scarcely to be thought of. Our generals and admirals will have to take the whole matter into consideration before the next great war occurs.

Sir Clements Markham made an extremely interesting speech at the annual meeting of the Royal Geographical Society. Perhaps the most striking point in it was his reference to the North Pole. It has been the dream of generations of navigators to reach this point, but now that Nansen has "drawn back the veil which concealed the Arctic mystery" we know that at the North Pole there is a deep sea nearly surrounded by land, with a flow of water inwards on the Siberian side, and outwards down the east coast of Greenland. But, obviously, the North Pole standing in mid-ocean would be quite a useless place to reach,

and though, in the words of Sir Clements, it would still be a "sporting thing to do," it would have no geographical interest. The speaker considered that Erichsen's exploration of East Greenland was the most important work that remained to be done in the Arctic regions. He said he had taken a great part in working for the despatch of Antarctic Expeditions, chiefly for the purpose of giving young naval officers and men a chance to distinguish themselves in time of peace. In his own words, "from the days of Nelson there have been no better fighters than Arctic men. Polar service braced them up for the regular work of the Navy."

TO SHAMROCK.

O Shamrock with the fevered feet,
At leisure all too soon,
I watch you crop the clover sweet
Through the spring afternoon,
Or nibble Stringy's orphan lock,
Stringy, who does the mowing,
So-called because a jerking hock
Affects his style of going.
You in the winters that are past,
When you were young and sound,
Could gallop across country fast,
For fencing were renowned;
Steeds have won greater fame, but none
In hunting found more pleasure,
Or, standing only fourteen-one,
Were brave to such a measure.
And still, although your breath comes quick
From feeding as you please,
Although your coat is rough and thick,
You love the grip of knees,
And cock your shapely ears with pride,
Content to feel them bumping,
When Joyce or Betty, set astride,
Indulge in bareback jumping.
But most you love a sombre day
When with a courage rash
A straight-necked fox has slipped away
From Egginton for Ashe;
Who, ere he leaves the brook behind,
That treacherous toll-taker,
Tries, where he hopes relief to find,
The earth near your Seven-acre.
Ah, then how madly you career,
So staid an hour before!
And how it thrills your blood to hear
The running pack once more!
And what delight to feel again,
When horse and hound have vanished,
Old memories stir within your brain,
Long to oblivion banished!

R. S. T. C.

A significant event in the history of agriculture is the fact that on May 30th the Bath and West and Southern Counties' Society will hold a show—the first this society has held there—at Nottingham. This is a remarkable innovation at a time when the Royal Society has been obliged to put an end to its migratory shows, and finds that to have a stationary one in London is not profitable. Why does the one society succeed and the other fail? Those who manage the Royal might very well turn their attention to this question. The Western Counties' Show is doing with success what the one under Royal patronage has failed to do. But, on the other hand, it has to be remembered that the Bath and West of England Society has always been exceedingly practical and exceedingly interesting. There is no show that farmers find it more to their advantage to attend than this one, and at Nottingham they will have in the neighbourhood several men who ought to be of the greatest assistance. There is the Duke of Portland, who, as his own estates show, is always extremely successful, and who himself is one of the most famous and wisest patrons of agriculture; Mr. Philo Mills, famed for his shorthorns and Shire horses; and there is Lord Milton, who, although president of the Royal Society, does not confine his attention to it alone, so that there is every reason to expect that the show will be a success. When the Royal held its show there in 1888 no fewer than 88,000 people paid their admission fees on the popular or shilling day, and there is no reason to think that interest in farming affairs is less now than it was then.

Englishmen always expect too much from railway companies, and then grumble at the expense that in the end comes out of their own pocket. In sparsely-populated country districts what possible good can be served by the erection of substantial stone waiting rooms, ticket offices, and so on, for the hardy country-folk who otherwise would be travelling by carriers' carts? A plank siding with a signal which can be worked by any intending passenger, who when the train comes up can get a ticket

from the guard, is a perfectly feasible arrangement, and one actually in use some twenty years ago at a little fishing station outside Montrose. One large railway in a western county has already adopted the halte system, in response to an appeal from a village parish council, and there seems to be no real reason why such a practice should not become more general on one train each way on market days. Safety could be ensured by careful timing, and the increased convenience would entail no expense.

The beautiful district of Ashdown Forest has again been ravaged by disastrous fires, extending far beyond the boundaries of the forest proper, invading the private woodlands of the ancient estate of Pippingford, and seriously threatening the safety of at least one of the houses on that estate. Last year the same thing, on a less extended scale, occurred, and there can be little doubt that incendiarism has been at work. The Conservators of the forest last year succeeded in obtaining a conviction against one of the incendiaries, but the judge let the man off with a caution. Considering the years of penal servitude awarded for the crime of rick-burning, so much less dangerous and destructive in its possible results, the sentence seems to the lay mind to lack a due sense of proportion. In the meantime the destruction of much of the larch and fir timber on the Pippingford estate may serve to point once again to the wisdom, which we have often preached, of clearing a strip of ground between woods and those open commons which are clad in gorse and heather that flares up alike to the match of the wanton incendiary and of the careless tourist, tramp, or gipsy.

County boundaries are ancient and historic landmarks which should only be tampered with when their occasional anomalies produce very real inconvenience, and it is to be hoped that the proposal of the Local Government Board to take away ten parishes from Essex and transfer them to Hertfordshire will not be accorded the necessary sanction of Parliament. The petition which has been put forward by the British Archaeological Association against the proposed transference, cannot fail to have the sympathy of the large number of Englishmen with a feeling for the past and its legacies who are interested in the matter as genuinely, if not as nearly, as the inhabitants of the ten parishes themselves. The limits of our counties are monuments of our country's past as real and vital as the White Horse in Berkshire, or Stonehenge. If, as is alleged, the present distribution of the parishes on the borders of the two counties is inconvenient for the administration of the Poor Law, it can surely be a matter of no great difficulty for the councils of the two counties to arrange for the area to be taken over by the other authority in return for a proportionate contribution.

An outstanding feature of the annual report just issued by the Board of Agriculture and Fisheries is the remarkable extension of the area over which the East Coast trawlers ply their trade. Grimsby smacks first began to fish in the waters surrounding Iceland nearly half a century ago, but the remarkable expansion of the industry dates from the introduction of the steam trawler in the middle eighties. There are now five or six times as many fishing vessels sailing from Grimsby to the waters of Iceland and the Faroe Islands as there were a dozen years ago, and there has been a like development of the fishery from Hull and from Boston. The Icelandic fishing is mainly carried on in the summer, and the Faroese in the winter months, when the badly buoyed and lighted shores of Iceland are found too dangerous a neighbourhood. A fresh field for the fishery is now being opened up in the widely separated waters of the Bay of Biscay and the Portuguese coasts, and it is likely that here, too, the next few years will witness a striking development.

One of the most striking features of bird-life at the present moment of the spring, is the large number of newly-built thrushes' and blackbirds' nests to be found in the copses and thickets of hazel, ash, and alder which are only now coming into full leaf. Though many birds of these two species, which nested in March or early April, are now engaged upon their second broods, these blackbirds and thrushes of the copses seem to belong to a different contingent, which is independent of the sheltered thickets and belts of evergreens where the earlier nesters are now in many cases sitting on a clutch of eggs for the second time this spring. Though the thrush and blackbird rank as resident species, they are to a great extent migratory, and it seems probable that many at least of this second relay of nests are those of birds which remained in more southerly quarters till a date when our own winter residents had already nests and eggs. It is remarkable to see how copses, which three weeks ago were almost bare of leaf and empty of life, have filled up automatically with nesting birds as soon as there was sufficient cover to hide them.

One of the best-remembered days in the sporting calendar is that on which the Derby was run in a snowstorm, and it is among the proverbially impossible things to see snow in June. But no one would consider it a prodigy this year after the weather we have been having. The cold has been what the careless reporter called "phenomenal," and from the Northern part of the kingdom snow has been reported several times. Cricketers in their flannels have shivered as much as if they were to strip for the game in November and February. We do not think that it can possibly have done a great deal of harm yet, except to the fruit crops, but it is retarding the growth of the cereals, and it is to be earnestly hoped, for the sake of the cultivators of the soil, that the cold snap will soon pass and hotter weather set in. The drought is as remarkable as the cold, and even in Scotland, where there is seldom reason to complain of a dry spring, the farmers are beginning to cry out for rain.

The conclusion of a good deal of very interesting tennis has shown that, despite his defeat last year, Mr. Eustace Miles is distinctly the best of our tennis players, distinctly better, too, than M. De Luze, the French amateur champion. Mr. Pennell, who snatched victory from Mr. Miles last year, was not dangerous this year, and Major Cooper-Key, well though he played, has waited perhaps a little too long before devoting himself seriously to tennis. Mr. Miles has more dash, more accuracy and steadiness in return, and greater ability to get up the difficult ball than any of the others. For a player of his high class, his service is not as severe as it might be, but he has made a considerable advance in this useful part of the game.

SPRING IN PURBECK.

Gold on thy hills: and in thine hollows gold
Blue is thy distance where the bluebells die
Beneath the silence of a bluer sky.
And where thy lovely presence is unrolled
The sweet strong sea lies blue, and brave and bold;
While midst thine hills the gallant sea-birds cry,
While in thy woods the nightingale doth sigh,
While tender lambs sob softly in their fold.
Ah, sacred spot: home of a thousand dreams:
Spring decks thee out in brilliant gold and blue:
Spring bids awake thy many voice-full streams:
Spring bids thee rise and robe thyself anew:
For summer calls: while all around thee gleams
The sea's bright swords, which keep thee safe and true!
J. E. PAXTON.

It is seldom that the game of billiards is referred to in these columns, but the match now proceeding between the two greatest experts at it stands out as something almost historic in the records of sport. As far back as most of us can remember, the name of John Roberts has been as familiar in regard to billiards as that of W. G. Grace has been in the world of cricket, all the more so, perhaps, because to some extent the faculty was acquired, and if ever there was a greater player than he it was his father, who used to hold the possession which eventually fell to his son. It used to be commonly believed that it was absolutely impossible to set John Roberts a task in billiards which he could not perform. The belief, perhaps, is not held to-day with as much conviction as it was ten years ago. He has grown older with the years, and in the person of Stevenson a player has come forward who appears to equal even Roberts himself in genius. No one can forecast the issue from the beginning of the play, but the fact that Stevenson made a break of over 400 at the first sitting would appear to show that Roberts, during the next fortnight, has his work cut out. However, let the result be what it may, the game will be watched with the deepest interest.

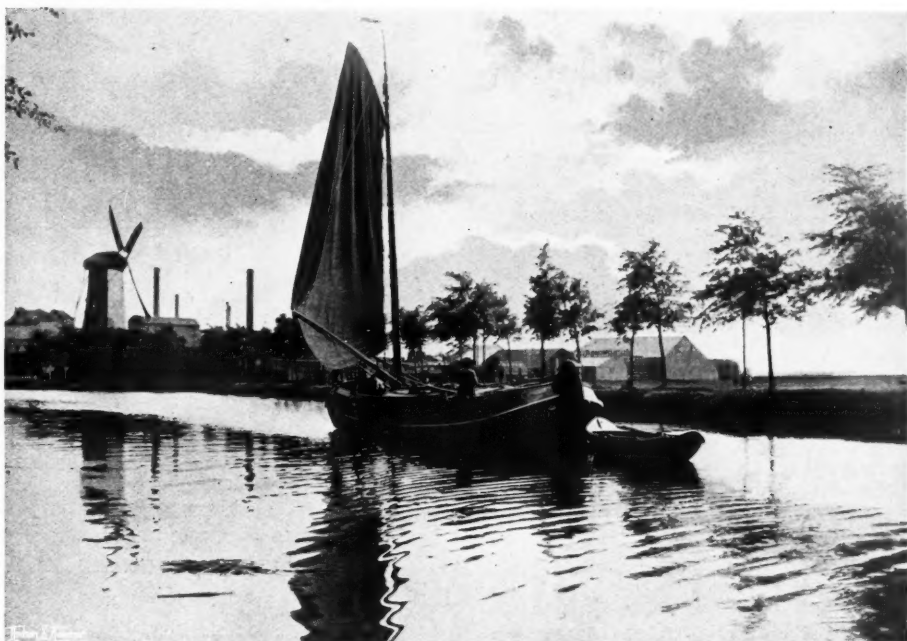
Public opinion will, we think, support the managers of Hurlingham Club in their repression of the pastime of pigeon-shooting. After the discovery of clay-birds and the perfection to which these have been brought there was no longer any excuse for the shooting of living pigeons. The object of the pastime was not that of killing birds or circumventing them, as is the case with wild pheasants, partridges, and other game; it was simply and purely a trial of marksmanship, and though the cruelty of the practice was very much exaggerated, since the guns at a place like Hurlingham, where nearly everyone who took part in the competitions was an accomplished sportsman, made deadly and short work of the birds, still some got away or were wounded, and the spectacle was not a very pleasant one to the crowds near a great town. On the whole, however, there is reason to congratulate the club on having arrived at a sound decision, and no doubt the rivalry between marksmen will be as keen over the inanimate pigeons as it was over those that were living.

Modern stained glass, as it is made in England, is a terrible thing, and great as is the progress of science in other directions, up to now it has failed to discover how the makers of mediæval times produced those wonderful deep tints which never tire the eye or offend the taste. At the soirée of the Royal Society last week an interesting fact about the influence of sunlight on glass was mentioned. It appears that windows with a southern aspect are liable to become gradually violet, owing to the presence of

manganese in them, and that possibly the beautiful tints in old windows may be due to this cause, instead of, as has generally been supposed, the immediate outcome of processes the secret of which has been lost. Radium, it has been found, in a few days will produce the same effect that otherwise it takes fifty years of sunlight to do, and the use of this may enable us to replace in windows, which can too often be only described as eyesores, really decorative and restful stained glass.

THE ADVANTAGE OF WATERWAYS.

THE keen discussion now proceeding in regard to many suggestions that have been made for reviving the disused waterways of England will give additional interest to the pictures we show to-day of canal life in the Low Countries. More and more it has been felt in this country that it was a great mistake to neglect the canals simply because we had the railways at command. There are many classes of traffic that can be carried quite as easily and much more cheaply by water as by land. Railways have plenty to do to convey passengers and those classes of goods for which rapidity of transit is essential; but at least one of the proposals now on foot is not connected with commerce and markets. The new departure in aquatic traffic is the proposal of the Great Western Railway Company in regard to the Kennet and Avon Canal, a fine waterway which is in their possession. The idea is to arrange it with the special purpose of making it suitable for motor-boat traffic. As it is fifty-seven miles in length, and communicates at one end with the Bristol Avon, the possibilities of touring opened up by this scheme are very extensive indeed. The scheme, if carried out, would be the means of securing a splendid experimental and exercising ground for these interesting new vehicles, and, if arrangements were made for easy transit



DRIFTING WITH THE BREEZE.

from London to the canal, there can be little doubt of the run becoming a highly-popular one. Were the Great Western Railway Company successful in their proceedings, the example, no doubt, would be followed elsewhere. For instance, the



HEAVY LADEN.

Woking and Basingstoke Canal, which came up for sale the other day and secured no bidder, could very possibly be adapted to meet the same purpose as that for which the Kennet and Avon Canal is intended. The Worcester Chamber of Commerce has drawn up a scheme which is more directly connected with business than that to which we have alluded. This is to create a South-West Midlands Waterways Trust. The idea is that the combination should acquire all the inland waterways of the Severn district, including the very canal that the Great Western Company propose to experiment upon, along with the Worcester and Staffordshire Canal, the Birmingham Canal Navigation of the North Western Railway Company, and others, amounting altogether to 567½ miles. The

scheme, it ought to be said, was not adopted by the Worcester Chamber of Commerce, but at a conference on the subject it was agreed to appoint a committee to report upon the details, and no doubt in some modified form the plan will ultimately be adopted, and, if carried out, it would give an indication to others of what it is possible to do with canals, of which we have now existing in England close on 4,000 miles. The difficulty at the present moment is to find a pioneer. In other countries the use of canals is fully recognised, and in these where they had been in existence for some time previously, they were not allowed to grow stagnant, as were ours, on the establishment of railways, and in some cases have been even busier since that period than they were before. We think the revival most advisable, chiefly because it would, to such a great degree, serve the purpose of agriculture. The greater part of the produce of the farm is in no need of being very expeditiously hurried from the land to the market. If we take cereals, potatoes, forage, and similar goods

it will easily be seen that the delay of a day or two in the delivery practically means nothing, and similarly with much that is sent from the town to the farm the necessity for hurry is not apparent at all. We take as instances such articles as artificial manures, seed corn, grass seeds, implements, and there is no need for express delivery in regard to any of them. Farmers know very well at what season of the year they will require artificials or seeds, and it would be just as easy to order them a week or so earlier as not. Implements, again, are never required in such a very great hurry that the loss of a day or two in transit would make any difference. At the end of the harvest the farmer knows whether or no he will require a new reaper and binder for next year, and so it is with the rest of his machinery. The money saved would be of more consequence to him than

the delay in regard to delivery. But of course a very difficult question arises in the matter of the formation of trusts. In the early days the tendency of railway companies was to buy up the canals, and so to keep possession of what were regarded as rivals to themselves. The theory has been proved by experience to be an entirely wrong one, as the railway companies, instead of neglecting the canals, would serve their own interests much better by acquiring and using them as subsidiary means of transit. Many of the lines are now overcrowded with traffic to such an extent that serious inconvenience is caused, and, where enormous passenger trains have to be run, the goods trains are greatly handicapped. But if bulky consignments, such, for example, as hay and straw, could be forwarded by canals, it would leave the railways

more at liberty to attend to lighter goods and to passengers. Of course a discussion is sure to arise as to the value to be placed on the canals at the present moment, and the worst of it is that the owners are likely to have their hopes raised by the suggestions thrown out. At the Worcester Conference it was proposed that the Severn District Canal Trust should value the proprietary interest at twenty-five years' purchase of the average profit of the last twenty-five years. Whether that be a fair valuation or no it is rather for experts in such matters to decide, as the proprietors might possibly argue that during the last twenty-five years they have been doing very little, and therefore that the possibilities attached to their property would make the canals worth much more.

However this may be, it is obvious waste to allow the canals to lie idle. They are in many instances almost a danger to the community, since they are choked with weeds and the waters have been allowed to become stagnant and foul, while the machinery and weirs are rusting from

disuse. The suggestion that the Government should take the matter up involves many important considerations. If the nationalisation of railways were about to be accomplished, we should certainly support a proposal that the Government should acquire the canals also, for the only profitable way of working the two is to keep them in harmony one with the other. Anything in the shape of competition is greatly to be deprecated. In point of speed there can be no comparison, and in point of cheapness rivalry would be suicidal. The railway companies would be driven to lower their rates unreasonably in regard to all those classes of goods which the canals can carry as efficiently as they do, but they would be tempted to compensate themselves by charging an increased rate for such articles as could only be carried by them. On the other hand, if the same



GETTING SAIL UP.

owner possessed the railway and the canal it would be easy for customers to decide beforehand whether they would have their goods forwarded by railway train or by canal boat, and naturally the companies would offer a differential rate, in order to relieve the pressure on their lines; and this, indeed, is the main objection to the formation of independent trusts. These, if they had no connection with the railways, would be, economically speaking, bound to set up the sharpest rivalry they could. In the circumstances, then, all good wishes should go with the Great Western Railway, which has been the first to show a commendable eagerness to bring back the canals into a position of utility. We have said nothing on the æsthetic side of the movement, but words are scarcely needed to show the improvement to the landscape that would be made by having a number of clear and shining canals running through the country and carrying in their barges great loads of straw, hay, or corn, causing no smoke and sending forth no sparks to burn up the hay or ignite the ripe cornfields. Perhaps some of those who are enthusiastic about the new garden cities may be brought to see that what they manufacture could be carried to town more conveniently by canal than by railway, and that the same thing might be said of the materials which they require in their business. It seems to be only reasonable to infer that, if factories can be carried on at a considerable distance from a great town, goods and materials need not be carried at express speed, and probably the gain in cheapness would more than compensate for any loss in rapidity. Besides, a canal through a garden city would do much to enhance its beauty, especially if the workers were encouraged to have green cultivated plots running down to the edge of the water. There, too, they could amuse themselves by fishing.

AN ANCIENT FISH-POND.

AS the traveller climbs westward up the long slope of the Cotswolds out of Oxfordshire and the wide Thames plain, there comes a moment at last when the range at its highest point drops suddenly away; and far below him, as he fronts the Welsh hills, lies a vale of meadows and orchards, dark with elms, and looped with the broad and shining Severn. A long curved ridge of mountain limestone rises in the midst of the valley to southward; and where these hills are cut by a narrow dale that hides a mill, a mill-pond, and a strip of yellow meadow, a little brook comes rippling down a side valley from the ancient fish-pond. It lies in ruins now, beneath the thyme and rock-roses on the hill, but it still preserves its strict rectangular outline, and the pile of earth and masonry that banked it up at the lower end is as yet only half demolished. Across the middle of it a narrow wall runs level with the banks, with a gap through which the water now passes freely over a sloping bed of stones, though once, no doubt, a hatch that could be closed at will divided it off into two separate reservoirs. It was the fish-pond attached to the large manor house, of which the ground plan, with all its outhouses and gardens, still ridges the turf over twelve acres of ground on the hillside beyond the mill. The great house has vanished, and of all its appurtenances nothing now remains except these lonely pools, where year by year the alder and willow tear further asunder the strong, ancient stonework, and the moorhen builds her nest in the beds of tangled reeds. There is something that cannot fail to impress the mind about these last surviving ruins of a bygone English home, of which the very name and memory have all but passed away; and it seems a strangely inconsequent turn of fate by which, when so much of greater importance has vanished, these adjuncts of the household food supply still linger on in comparative immunity from decay.

The pools in their valley have been so many years abandoned by man that they have long become the home of shy creatures of the water and wood, and seem to have been wholly reabsorbed by the quiet forces of Nature. The carp and tench that supplied the manor tables have vanished many a year ago, and to-day even the kingfisher from the stream below can find no prey in



NO NEED FOR SPEED.

the dark waters beneath the bordering thickets of the lower pool, or among the sand-banks and silted islands that fill the upper one. To the head of the pool a spring a little higher in the valley sends down a clear spout of water through a broken conduit in the wall, and high above it rises an ancient ivied oak, with its roots clamped all about the masonry in a fluidity of line strangely at variance with the tree's rugged strength. Not in four centuries, or even five, can this great stag-headed oak have lived out its youth and strong maturity, and reached this present period of decline; and from the way in which it is rooted into the stones of the wall, it appears impossible that the masonry should not be still older than the tree.

At every time of year, but most of all in the flush of rising spring, the two ancient pools are a favourite haunt of the natural life of this rich Western vale, where a century ago, on a hillside not a mile away from this very spot, the last wild stocks of an ancient vineyard were to be seen putting forth their tendrils in a stony wood. In the antiquity of this peaceful place each year's



WATERWAYS: NEARING THE WHARF.

fresh life of bud and insect and flower seems to gain an added beauty, as the red oak-buds unfurl to tenderest green on the shattered limbs above the conduit, and the smooth fronds of the western hart's-tongue fern unroll beneath the alders in the crannies of the ancient wall. At midsummer the ooze of the

upper pool is carpeted with blue stretches of forget-me-not, a flower which grows here with a lusty vigour it never displays in the thirstier soil of a dry garden-bed; and between its breadths of turquoise blossom rise the heraldic heads of the golden iris, giving place a little later to the massed spikes of July loosestrife, and, later again, to the dense August plumes of the hemp agrimony, on which the peacock butterflies gather, a score together, to fan their eyed wings as they probe for nectar in the mauve, cottony heads. This valley is spring's highway into the hills, and every year, when the blossoms of the palm-willows are bright for an early Easter, the tinkling notes of the chiffchaff come dropping from the oak; and when the chiffchaff leads the van, one after another the summer birds come pressing up this road. In the bright mornings of later April the place is filled

with the spring shouting of the wryneck, which nests year by year in a hoie in the many-blossomed crab tree, rooted on the wall between the ponds; and all day long, soon after the willow-wrens have come into the alders, with their sweet, descending trills, the reedy tangle of the upper pool is filled with the sweet babble of the tireless sedge-warbler. On into the night he sings, while the clean fragrance of the thyme comes breathing from the hillside in the dew. And so he has sung season by season in the nights of spring since the year in the unknown past when the first sedge-warblers, returning homeward up this valley from the South, found in their path the two new ponds brimming clear and full where only the thin stream had run before, rested here in gladness and surprise, and built their nest in the tangled brushwood under the hill.

A. C.

THE EYES OF INSECTS.

THE organs of vision of insects differ considerably in number, structure, position, and comparative size. In the higher orders of animals each individual is provided with a single pair of eyes of practically uniform structure. With insects, on the contrary, the eyes of nearly every species have distinctive features, and instead of the number

being limited to a single pair, they may be numbered by thousands in one individual.

An equal disparity in size, when compared with the higher forms of animal life, is also observable. Instead of occupying a fraction of the cephalic surface, as in the vertebrata, the eyes of some insects form more than half the bulk of the entire head.

The visual organs of insects may be divided into two distinct classes, viz., compound and single. The compound eye consists of a large number of single eyes, or,

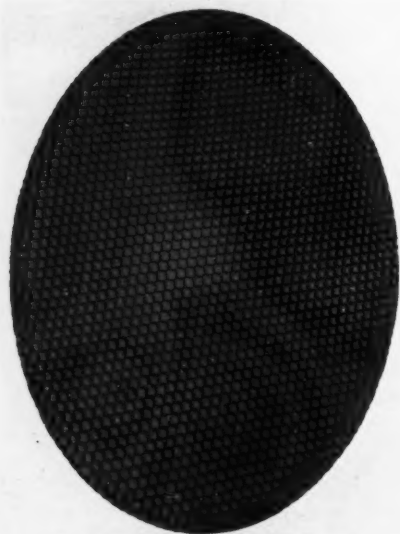
as they are usually termed, ocelli, arranged in regular lines. Every insect possesses, in addition to a pair of compound eyes, two or more single eyes, or stemmata, as they are designated by entomologists. The single eyes, except in the larger insects, are, generally speaking, invisible to the unaided vision, but are easily seen with a magnifying glass. The position in the head of the insect of the stemmata varies in different species. In some cases they are between, in others they are placed above, or at the side of, the compound organs. The usual number of these small, simple eyes is from two to five, but in larvæ they are often more numerous.

A small portion of the exterior facets of a compound eye as seen under the microscope is shown in our first illustration. The surface of the eye is divided into a vast number of hexagonal cells.

Each of these cells contains a single eye or ocelli. The number of ocelli contained in a compound eye varies enormously.

A compound eye of the common fly contains about 2,500, while the eye of a dragon-fly may have as many as 12,000, facets. For many years it was a matter of dispute among entomologists as to whether each of the ocelli in a compound eye formed an independent image, or whether all the eyes combined to give a single retinal impression; but it is now proved that each ocelli is a complete organ of vision. The compound eye, however, is hemispherical in shape, consequently the lenses of the ocelli are not all directed at the same object or portion of object. This will be seen by reference to the illustration of a section through the eye of a cockchafer, from which it is evident that the compound eye as a whole must receive impressions from a large area of view, while the view of each ocelli is limited to the portion opposite the facet. Under these circumstances, although each eye is complete, its range is extremely limited, and the whole of the compound eye is required to give comprehensive vision. Consequently the image seen by the compound eye of an insect may be said to be composed of a mosaic of small images. The surface of a part of the compound eye of an insect is shown in the first illustration, which is a photo-micrograph of the facets of the drone fly. The hexagonal eye cases or facets are clearly seen in this photograph. As the eye of this insect is very large, only a small portion of the organ was in the field of view of the microscope, consequently the eye appears flat or nearly so.

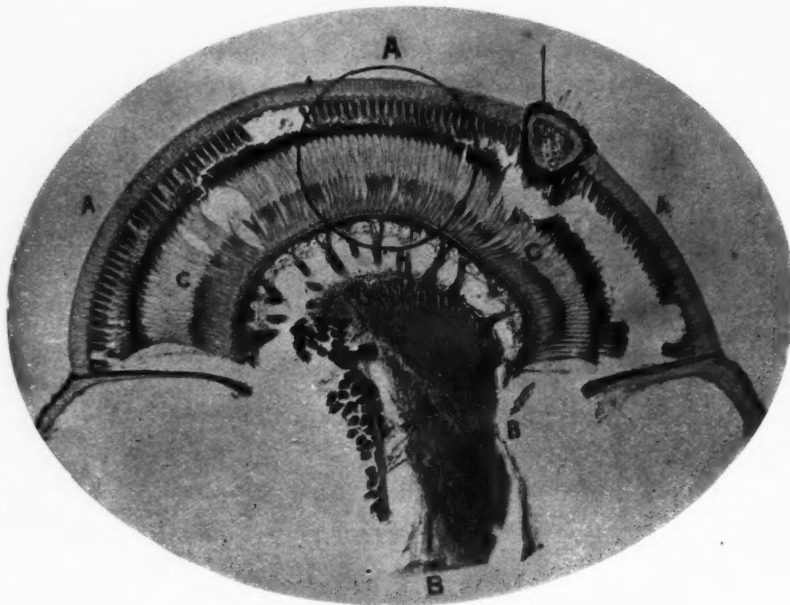
In our next illustration, the eye of a beetle, the rounded form



COMPOUND EYE OF DRONE FLY



COMPOUND EYE OF BEETLE.



SECTION THROUGH COMPOUND EYE OF COCKCHAFER.
 Portion in circle A reproduced in following illustration: (a) External facets of eye. (b) Trunk of optic nerve. (c) Fibres of optic nerve.

of the compound organ is more clearly demonstrated. When a carefully-cut section of a compound eye is examined under the microscope a very interesting and intricate structure is observable. The general appearance of a section through a compound eye is shown in our third illustration, which is a photo-micrograph of a section, slightly damaged in cutting, through the eye of a cockchafer. The external facets, of which a front view was given in the first photograph, are here shown in profile.

The fibres of the optic nerve, which are seen to lie in rows below the dark band, convey the light impressions to the trunk of the optic nerve, which is shown at B. The dark band of pigment below the facets receives the image given by the eye lenses. The facets and nerve fibres are best seen in the more highly magnified portion in the succeeding illustration.

Coming now to the single eyes, or stemmata, the photograph of a side view of the head of a locust shows the compound eye occupying a prominent position at the side of the head; beside this a single eye, or stemmata, is visible, the locust having two compound and two single organs of vision. The compound eye of this species of locust is of a dark brown colour, with black bands running down the eye.

The illustration of a front view of the head of a demoiselle shows a prominently-placed compound eye at each side of the head, and a cluster of three single eyes in pyramidal form between them; this arrangement of the single eyes is common among certain species of insects. Although spiders are not classed with insects, they resemble them in possessing more than one pair of eyes. Unlike fully-developed insects, spiders have no compound visual organs. The two principal eyes, however,

are somewhat larger than the stemmata; the number of the latter varies from two to eight.

The eyes and stemmata of the jumping spider (*Marpessa muscora*) are placed in a row on the front of the head, the stemmata, two in number, being situated on either side of the principal eyes. This spider is usually found on fences and trunks of trees, and is easily recognised by moving in a series of rapid little runs, hence its name. The four eyes of this insect, on account of their prominent situation, are readily seen by the naked eye. In the case of a South African spider, seven eyes are situated on the top of the head, and form a complete circle; the principal eyes are scarcely distinguishable from the stemmata in this specimen.

J. I. PIGG.

A GLADE IN SPRING.

THOUGH the merry month this year has been noteworthy for its many chilling breezes, the very coolness of the atmosphere appears to have retarded the development of the earlier flowers, and produced a wealth of beauty that would have delighted Dan Chaucer or any of the other mediæval bards who sang the beauties of spring with so much fervour. At least, this was what we thought the other day when looking down a favourite glade. It has a pathetic human interest as well as a pictorial one. At the top is a row of houses, now in ruins and used as cattle-sheds, once the homes of hard-working labourers. A little stream babbles down the middle and passes the ruins of an ancient mill, of which little but the foundations are left. Adjoining it we can trace the ground plan of what must have been a substantial house, and the boundaries of the garden are still visible, while cherry and apple and pear trees throw out their blossoms to the sun, to which also the stalks of roses spring upwards. Here is a plot where gooseberries grow, and there stray garden flowers still thrust up through the turf. But in spite of these memorials of human tenancy the place now is wild and solitary, for it is in the middle of moorland, which, again, adjoins pastoral and arable fields. The lost touch of

human cultivation seems to lend a charm they would not otherwise have had to the beauties scattered by Nature upon this prodigal spot. Where children's voices, no doubt, rang joyously out on the air, the singing of blackbirds and thrushes is alone audible—alone, that is to say, except for the voice of the stream, which prattles unceasingly over its stony bed, and that of the "sorry" wind, blowing where it listeth, as it has blown during all the æons of time, over multitudes of generations, who have played their part "on this dim spot which men call earth" and are now gathered to their forefathers. Indeed, not far off there is a churchyard even more suggestive of change than the ruins in this glen, for it shows only the headstones of a few ancient graves, and you have

to search well before discovering the foundations of four walls that must once have enclosed a church. One cannot but think of the two together: this glade bereft of all that is human; that God's Acre with its tender and holy memorials of the dead. But to all this human change Nature is wholly indifferent, and she has

prepared a scene to-day that is probably more exquisitely beautiful than any set before the eyes of those who inhabited the house and the mill. There are broad expanses of turf where the primroses linger in such profusion as the writer never witnessed anywhere else; here they attain a size which is most uncommon, nor is there any sign that one floret has been plucked by human hand. Unwitnessed they have come out, and unregarded they are withering on their stalks. Those pale flowers give the general aspect to the open spaces, but on closer observation we discover that the ground is starred with other wildings, ranging from the tiny forget-me-not to the joyous kingcup or marsh-marigold that glows on the marish banks of the stream. Circling round each open space are areas which the gorse has



SECTION OF EYE OF COCKCHAFFER. HIGHLY MAGNIFIED.



HEAD OF DEMOISELLE, SHOWING COMPOUND EYES AND THREE SINGLE EYES.



LOCUST'S HEAD, SIDE VIEW, SHOWING COMPOUND AND SINGLE EYE.

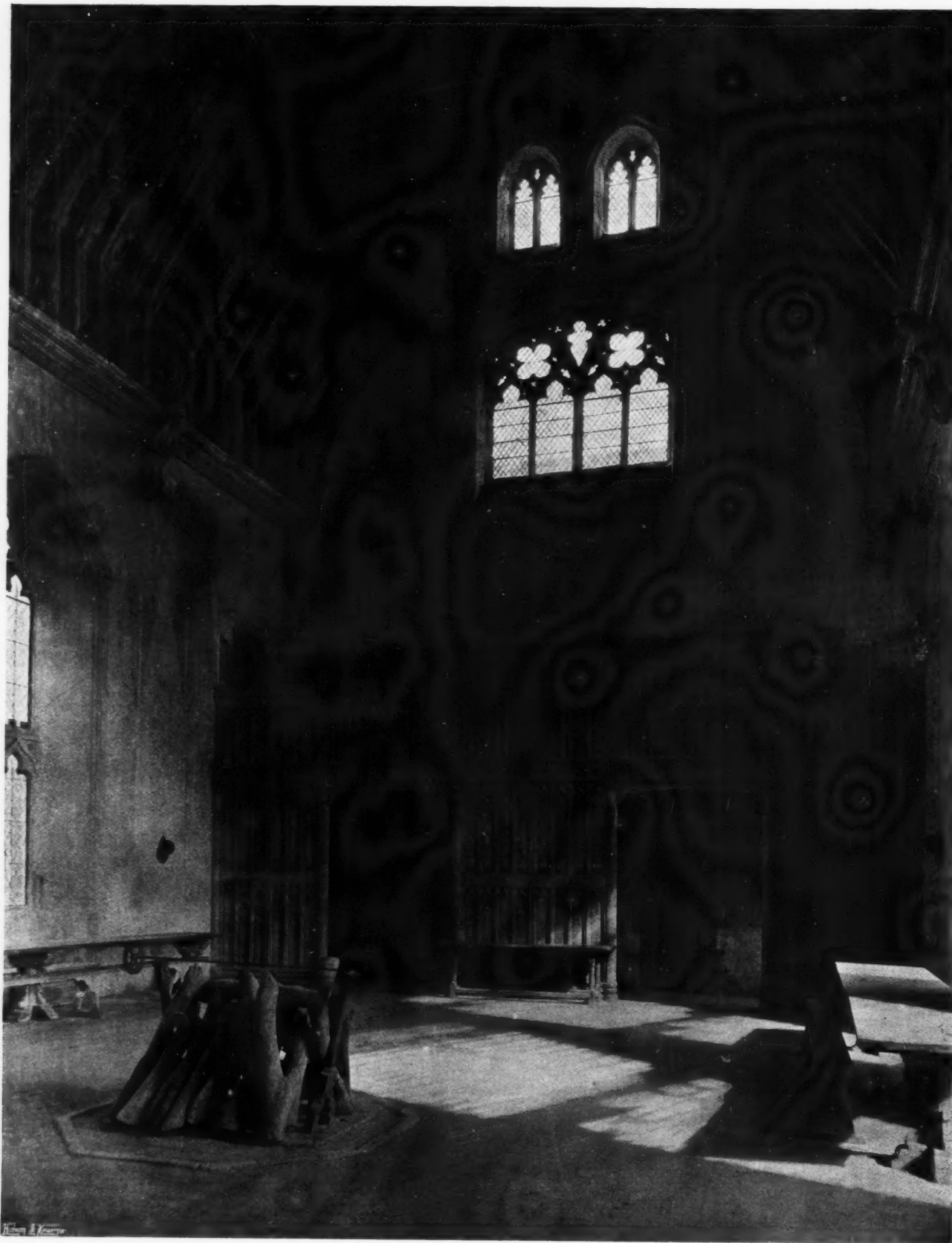


EYES OF "JUMPING" SPIDER.

made its own. It is now in full flower, and glowing with its characteristic ruddy bronze, so different from the more golden broom, of which a bush here and there is bursting into flower. And if we were so foolish as to think that only man is subject to the vicissitudes of change, it would be sufficient to sit here for a little while and watch. For amid all this glowing and quivering beauty Nature still shows herself red in tooth and claw. The young rabbits are playing outside the gorse, when suddenly a stoat makes its appearance among them, chasing one that it has singled out from the colony, and eventually the cruel jaw is fastened on the back of its head. The little birds are singing their joyfulest, when all at once a sparrow-hawk dashes on the merriest of their number, and his song is forever

ended. In this way the mighty mother shows her indifference to the individual member.

And whether she be careful of the type or not is more than doubtful when we think of the extinct races that have had their little day on the earth and are now no more. Perhaps, after all, what we call Nature is only an abstraction. The blue sky and the white clouds scudding over it; the wind moving restlessly hither and thither and singing its monotonous chant in the tree tops; flowers that appear in spring, and pass away before the autumn showers and the winter frosts; the birds that sing, and the furred things that run about, may be, as some have thought, merely separate phenomena, and under no general governance beyond the physical conditions that gave them being and can end it.



E. R. Bull.

FOURTEENTH CENTURY BARONIAL HALL.

Copyright

TOWN CLOCKS.

IN the design of public buildings, no one thing has, I suppose, distressed the souls of architects so much as the provision of clock dials. The rush of modern life allows no time for examination. The dial must be, both by day and night, legible at a glance, with hands rendered visible by pronounced contrast; and to comply with this condition the clockmaker usually puts forward a glazed white disc, which, as a rule, harmonises with none of the surrounding structure, and proves to be an anachronism, however placed.

Until the middle of the seventeenth century anything like precision in denoting fractions of an hour on a dial was not so much thought of as recording complex movements of the heavenly bodies. Indeed, the earliest clocks had no dials; they merely announced the completion of each hour by strokes on a bell. The exhibition of mechanical figures, armed with weapons with which they appeared to strike the bells, were much in favour before the introduction of dials, and proved to be a lasting attraction. There was, prior to 1298, a clock at St. Paul's Cathedral with such figures, and Decker, in his "Gull's Hornbook," calls them "Paul's Jacks." In the accounts of the cathedral for the year 1286, allowances to Bartholomew Orologiario, the clock-keeper, are entered—namely, of bread, at the rate of a loaf daily. In 1344, the Dean and Chapter entered into a contract with Walter the Orgoner of Southwark to supply and fix a dial, from which it may be inferred that the clock previously had no dial. In Dugdale's history of the old cathedral the dial is referred to as follows: "Somewhat above the stonework of the steeple was a fine dial, for which there was order taken in the 18th of Edward III. that it should be made with all splendour imaginable, which was accordingly done; having the image of an angel pointing to the hours both of the day and night." The dial was placed below the "Jacks," which were not ousted from office, but continued to strike the hour with their accustomed regularity.

With few exceptions, the earliest clocks and watches had the hours marked with Roman numerals, placed radially with the bottom of each numeral towards the centre of the dial, so that the V., VI., and VII. appear to be upside down. Another peculiarity is that the fourth hour was denoted in a very primitive way, thus: IIIL., instead of by IV., which was then the more orthodox manner. And it is somewhat remarkable that these features have been continued to the present day almost unnoticed, as may be proved by asking anyone to sketch the figuring of his watch without looking at the timekeeper, for in most instances



R. W. Thomas.

BOW CHURCH.

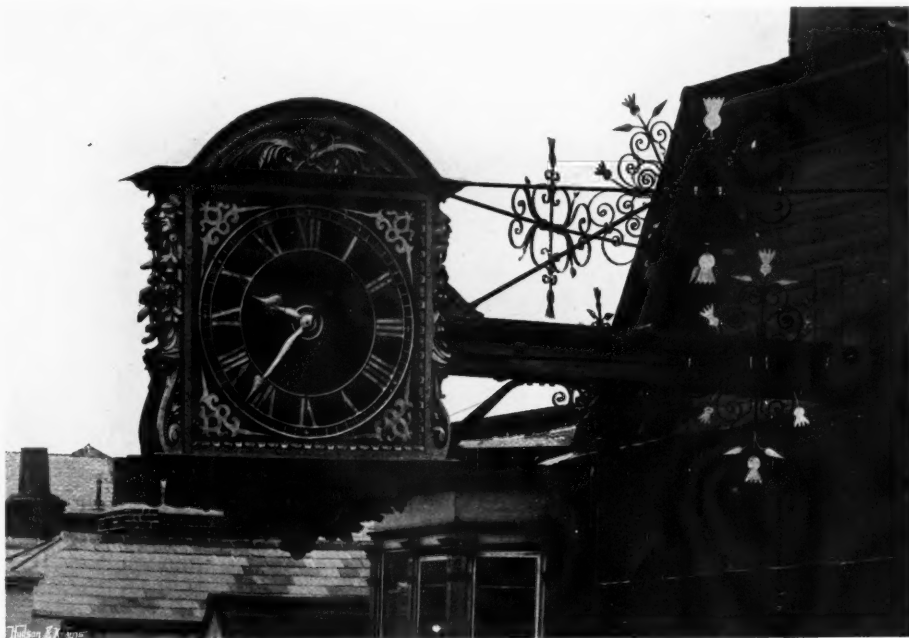
Copyright

such a sketch would be incorrect.

On modern dials the hour numerals are, as a rule, too long, the position of the hands being more easily discerned with the stumpy figures used on earlier dials. The most effective hands were those seen in clocks and watches of the eighteenth century. The chief fault of most varieties now used is that the spade or heart or other enlargement of the hour hand is too close to and overlaps the numerals. It should be of good size and nearer the root of the hand, the tip of which, though closely approaching, should, in its sweep, just clear the numerals.

In designing the new cathedral of St. Paul's, Wren was conspicuously successful in satisfying the demand for legible dials which should not be in distressing contrast to the rest of the building. Two sides of the clock tower, one facing down Ludgate Hill, and the other looking towards the south side of the churchyard, were utilised for dials, black rings being painted on the stonework, on which the hour circles and the numerals were deeply incised and gilded. Each dial is a trifle over 17ft. in diameter, and the central opening measures about 6ft. 6in., the hour numerals being about 2ft. long. The clock was the production of Langley Bradley, who at that time carried on business in Fenchurch or Fenchurch Street, and it proved to be an exceedingly good one, serving well as a public guide for nearly two centuries, when the movement was replaced by one of the Grimthorpe pattern. In 1892, when the new mechanism was fixed, the dial on the eastern side of the tower was provided with hands, and illumination was decided on; but with the central openings filled in with whitened glass the effect was too dreadful, and the attempt to bring St. Paul's clock into line with other more modern timekeepers, from a merely utilitarian point of view, was abandoned.

The hour bell of the St. Paul's clock had a somewhat remarkable history. In the year 1700, when the cathedral was approaching completion, the Commissioners purchased, for 10d. a pound, from the churchwardens of St. Margaret's, Westminster, the celebrated Great Tom, which formerly hung in a clock tower facing Westminster Hall, and which appears to have been given to the churchwardens by William III. They then entered into a contract with William Whiteman to recast the bell, and when the work was done the bell was temporarily hoisted into the north-west tower of St. Paul's and exhibited to the public, Whiteman being paid £509 19s. for his labour. But lo! after sustaining many blows for the delectation of the ears of the citizens, Great Tom the second exhibited a crack which rapidly



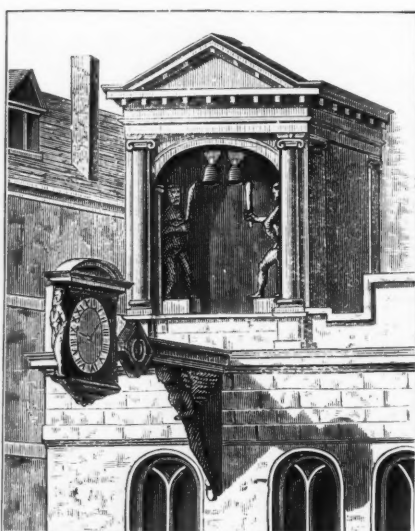
R. W. Robinson.

THE GUILDFORD CLOCK

Copyright

developed, so that the bell was pronounced to be useless. The Commissioners suggested that of course Whiteman would make good his work by recasting the bell. "Not so," rejoined Whiteman. "I delivered to you a sound bell, for which I was paid, and since it has been in your possession it has been cracked." So to make the best of a bad job, a very stringent agreement was entered into with another founder—Richard Phelps, to wit. The accident with the first hour bell accounts for the difference between the date of the finishing of the clock and the time when the Phelps hour bell was cast, around the waist of which is the inscription, "Richard Phelps made me 1716." It is 6ft. 9½in. in diameter at the mouth, and according to Phelps's account, dated December 31st, 1716, weighs 99cwt. 3qr. 7lb., of which 7cwt. 2qr. 21lb. were new metal. Just below the hour bell were hung two bells on which the "ting-tang" quarters were struck; the larger of these weighed 1 ton 4cwt., and the smaller 12cwt. 2qr. 9lb.

Above the main entrance at the western end of the old church of St. Dunstan's in the West, in Fleet Street, were erected in 1671 two gilded clock dials, placed back to back, and mounted in a handsome square case, with circular pediment, which projected well out over the footway, the tube containing



ST. DUNSTAN'S IN THE WEST.

building, became exceedingly popular at the end of the seventeenth and beginning of the eighteenth century. After the fire of London appeared the really charming example which still adorns Bow Church in Cheapside. Wren doubtless had some influence in the form of this, if the whole of the design was not his. The ground of the dials is blackened, and the numerals and hands are gilded, forming altogether a distinct and not too obtrusive an object, viewed in conjunction with the fabric. The hands, too, are exceedingly well shaped, while, as a timekeeper, the Bow Church clock bears an excellent reputation.

Guildford in Surrey appears to have been particularly anxious to keep its inhabitants advised of the time. In January, 1654, was passed "an order for a bellman and his maintenance," Thomas Ellis being appointed as bellman "to walk the streets from eleven of the clock at night till fower of the clock in the morning with a bell in his hand, which he shall ring when and so often as he thinketh fit, and declare with a loud voyce the tyme of

the night or morning and what weather it is." Then, in 1664, it was ordered "that a bell be rung every evening at eight of the clock and every morning at fower to call up journeymen and apprentices to their work and labour at that tyme in the morning, John Wadmore and George Cooke being appointed to ring out the tenor bell at St. Mary's for the space of a quarter of an hour." The handsome double dial clock of the Town Hall here shown was given by a Mr. John Aylward for his freedom, presumably in 1683, the date recorded below the dial. It is stated that the bell on which the hours are struck formerly belonged to St. Martin's Church at Chilworth, two miles distant.

Another bold and picturesque double dial is that projecting from the old Guildhall in the High Street, Winchester. It was the gift of the Paulet family when the building was erected in the reign of Queen Anne, and bears the arms of the family. It is claimed that the custom of ringing the curfew has been regularly observed at Winchester since the time of the Conqueror. It is still sounded every evening at 8 p.m., the bell of this clock being utilised for the purpose. The bell is, moreover, rung for fifteen minutes whenever the Council meet. It was made by Clement Foster in 1702. The clock mechanism was renewed in 1817 by Gravell and Tolkien, well-known London makers of that period, and probably fresh dials were supplied at the same time. The cost of the renewal was borne by Mr. William Poulett, a copy of whose letter to the Mayor, acknowledging a vote of thanks, has been obligingly furnished to me by Mr. Alderman W. H.



R. W. Robinson. GUILDFORD HIGH STREET.

Copyright

the rod for actuating the hands being supported by a well-carved figure of Time. An alcove was built on the roof of the gateway, and within were large, gaudily painted and gilt, figures of Gog and Magog, which struck "ting-tang" quarters with clubs on two belis suspended above them. The clock and figures were designed and erected by Thomas Harrys, a clockmaker, then living at Water Lane, Blackfriars. Harrys submitted a statement of what he proposed to do, and after describing the "two figures of men with poleaxes to strike the quarters," continues, "I will do one thing more, which London shall not show the like; I will make two hands show the hours and minutes without the church, upon a double dial, which will be worth your observation and to my credit." The figures of Gog and Magog proved to be a great attraction; they speedily became one of the sights of London, and their removal in 1830, when the church was rebuilt, elicited many expressions of regret.

The idea of projecting from a corbel or bracket dials of public clocks, whereby the necessity of planting what in most instances appeared to be wanton excrescences on the face of the



W. T. Green. GUILDHALL, WINCHESTER.

Copyright

Jacob of Winchester, who has also looked up from the archives the other particulars here given.

An interesting structure in the High Street, Rochester, is the Clock House, from which projects a drumlike case containing double dials. This form, it must be confessed, marks a distinct decadence from the elegant outline of the earlier designs. It is surrounded by the arms of Sir Cloudesley Shovel, and below, on an oval plaque, is the following inscription: "This present building was erected at the sole charge and expence of Sir Cloudesley Shovel, Knight, A.D. 1706. He represented this city in three Parliaments in the reign of King William III. and one



A. Honey. CLOCK HOUSE, ROCHESTER. Copyright

Parliament in the reign of Queen Anne." In 1771 the Mayor and citizens removed the original dials and provided the present ones with the addition of minute hands.

In 1859, the gigantic clock of the new Houses of Parliament started on its career, and has been pretty generally accepted since as the chief of the London "Town Clocks." Sir Charles Barry had been happily not hampered in designing the case for his white glazed dials. He wisely determined to devote the whole of the north-eastern, or "Albert," tower to their service, and the result is the grandest clock-tower in this or any other country. Viewed from the pavement at a little distance away its size is hardly appreciated. There are four dials 180ft. above the ground level, each of them being nearly 23ft. in diameter; the hour numerals are 2ft. long, and the minute spaces each 1ft. square. Each minute hand measures 11ft. from its centre of motion to the point, besides a visible counterpoise 3ft. long. To ensure correct timekeeping in so large a clock with such a number of long hands exposed to the wind or other disturbing influences, special mechanism was designed by the late Lord Grimthorpe (then Mr. E. B. Denison), and he was as successful in his department as was Barry with the dials. A few months ago, when I had the privilege of climbing the 374 steps leading to the clock-room, I was sorry to notice that cards giving some particulars of the clock, which were distributed to visitors, entirely ignored the creative part played by Lord Grimthorpe. If this was done with the sanction of the Office of Works, it savours of ingratitude to the man who provided for the nation a timekeeper which is in many respects the admiration of the world.

The bells are arranged in a chamber above the dials. The hour bell is 9ft. in diameter, is 8½in. thick at the sound-bow, and weighs 13 tons 11cwt. There are four quarter bells, weighing respectively 78cwt., 33½cwt., 26cwt., and 21cwt. The chimes are admirable. The first hour bell that was cast weighed 16 tons, being 2 tons over the prescribed weight. It was called "Big Ben"

after Sir Benjamin Hall, who was First Commissioner of Works when the order for the bell was given. Shortly after the clock was started the bell cracked. As in the case of the St. Paul's bell a century and a-half earlier, the question arose, who was to pay for recasting it. The founder would not, as he declared too heavy a hammer had been used; but the authorities averred that the hammer was only of a weight sufficient to bring out the tone of the bell. Eventually the present bell was obtained from another founder, duly hung and approved. But after being in use a few months its tone altered, and it was found to have developed a crack on its inside 3in. deep. For three years afterwards the hours were struck on the largest of the quarter bells, and then someone suggested turning "Big Ben the Second" round, so as to present a fresh place for the hammer to strike on. This was done, and a lighter hammer provided, with a result so far satisfactory that during the years that have elapsed the fissure does not seem to have increased.

Many people take the time from the first note of "Big Ben" at the hour; but to be exact, allowance should be made for the interval which has elapsed between the striking of the bell and the reception of the note. Sound travels at the rate of 1,110ft. a second, and Big Ben can sometimes be heard at Greenwich Park, the sound taking 26sec. to get there.

The dials on the tower of St. Clement Danes in the Strand are excellent, and furnished with well-proportioned hands. Unless altered very recently, the clock strikes each hour twice. The strokes are given first on a large bell, weighing 24cwt., and then repeated on the Sanctus—a bell in the spire, which is said to date back to the fifteenth century, and to have been one of the bells used before the Reformation. On account of the roar of traffic along the road, the striking cannot be heard except at night, and when it is heard the effect is curious, for the repetition appears to the uninitiated to be the tardy striking of another clock in some adjacent tower.

In the early part of the eighteenth century the Horse Guards' clock, made by Vulliamy, was considered by many people to be the most reliable guide to the flight of time. It, as well as the clocks at St. James's Palace and the Houses of



IN SOUTHAMPTON STREET.

Parliament, was regulated from observations made at the Kew Observatory, being checked daily by chronometers brought from Kew.

With the advent of railways the variation of local time east and west along the lines of route was the source of much confusion, and in 1850 Greenwich time was adopted as the standard throughout the kingdom, London Bridge Station being connected telegraphically with the Observatory at Greenwich. In many towns public clocks carried two minute hands, one indicating local, the other Greenwich or "railway" time. To this day, I believe, the large clock at Oxford University, which

has no dials, but sounds the hours and quarters, is kept to local instead of Greenwich time.

The church of St. Vedast, Foster Lane, may be mentioned as an instance of a public building with a tower clock which struck, but had no dial. The clock is not now kept going, I am told, because there is no fund to pay for periodical and necessary winding. It is a pity. Clocks striking the quarters as well as the hours are common enough, but Westminster Abbey furnishes a solitary instance of one telling the quarters only. This is done by the timekeeper in the Poets' Corner, which is also peculiar in being probably the largest spring clock ever made.

The exterior dial on the Westminster Abbey tower clock, which carries an hour hand only, is often referred to as being exceedingly ancient. This is a pardonable mistake, for it is well in character with the building, but people forget that the Abbey towers were razed by Henry VIII.; the present dial and clock really date from 1730.

When the new Royal Exchange was being built, a public clock was declared to be a *sine quâ non*. Mr. (afterwards Sir) William Tite knew better than to spoil his noble façade by any such interpolation. He provided a tower for the clock, which is, however, in such a position that it is rarely consulted by wayfarers, though its welcome chimes make its presence known.

Mr. Street's original double dial for the Law Courts will, I daresay, be remembered by many people who take an interest in clocks. They were admirably in keeping with the building, but owing to their height from the pavement it was realised that for showing time to the public they would be quite unsuitable, and so they were quietly taken down and the present very legible clockmaker's dials substituted. They are each 8ft. 6in. in diameter. The hours are struck on a bell weighing 3 tons 12cwt., and the four quarter bells weigh altogether about 5½ tons.

A projecting double dial clock, by Mr. E. L. Lutyens, recently erected in Southampton Street, Strand, is an attractive object designed on the old lines with considerable artistic feeling.

The absence of numerals does not detract from the purpose of a dial. The fact is, we do not read the figures when looking at a watch or clock, but judge the time from the position of the hands. Lord Grimthorpe was instrumental in having the hours of the large clock at the Dining Hall, Lincoln's Inn Fields, marked on the outside dial by radial strokes, and many passers-by fail to notice anything peculiar in the treatment.

One of the most important of provincial clocks is that at the Manchester Town Hall. There are four dials, each 16ft. in diameter, but instead of numerals at the hours, each hour division is marked by a fleur-de-lis; the central portion of the dial is recessed for the reception of the minute hand, and except for the inevitable glare of the white glass, the treatment of the dial and surroundings is excellent, reflecting much credit on the architect, Mr. Waterhouse. The hour bell weighs 6 tons 4cwt., and for chiming the quarters there are no less than twelve bells, ranging in weight from 52cwt. to 7cwt. 2qr.

THE FAILURE OF . LOBSTER HATCHING.

A FIRST view of the attempts which have been made at lobster hatching gives the impression that it is an eminently successful and easy undertaking. There is, to begin with, the fact of the establishment of hatcheries in the United States, in Newfoundland, in Canada, in Norway, and more recently in England. There are the records, which convey each year the information that a large number of eggs have been dealt with, that a large percentage have been hatched, and that many millions of fry have been poured into the sea in the districts which were to be benefited. It cannot be said, therefore, that there is any failure so far as the process is concerned. Lobster hatching may be done on as large a scale as may be demanded. The resulting fry, moreover, may be deposited with little or no loss even at great distances from the hatchery. Nevertheless, it is the fact that the districts which should have benefited by such operations have not improved, and indeed in one case at least there is evidence that the fishery has become gradually worse instead of better. The hatcheries of this country are of too recent origin to illustrate this, but we have the histories of the efforts which have been made in the States, in Newfoundland, and in Canada. In none of these cases can it be shown that the slightest improvement has been brought about; the diminution which they were meant to arrest has continued, and, worst of all, several of the hatcheries have been given up altogether. There is, moreover, in the countries named a general tendency to seek improvement in further restrictive legislation.

It is a great pity that the results have been so disappointing in this most important and essential respect. For it is not too much to say that, if the choice lay between artificial hatching

and further legal interference as a means of improving the productivity of the lobster fishery, and it could be proven that even an equal good would result by the adoption of either method, there would not be the least hesitation in establishing hatcheries in many districts, and as fully as the circumstances of each fishery demanded.

The reason of the failure is, however, not far to seek. It is simply that the fry are deposited at a stage when they are most liable to destruction. During the period of about eleven months that the ova are borne under the abdomen of the female there is a practical immunity from danger; and even the prospect of loss of the mother lobster need not be considered, apart from the action of the fishermen. The number of ova which a female lobster may carry when in the "berried" condition is from about 3,000 to 100,000. All the females are not berried, however, the proportion being about four berried to nine not berried. But, apart from this consideration, it is plain that the large number of larvæ liberated every summer is a provision against an enormous natural destruction. It may be said, moreover, without much fear of contradiction, that the intensity of the loss is greatest immediately after hatching, and gradually decreases, especially after the first three weeks of the free existence. During this short period after the birth of the larvæ the latter are pelagic, and have to undergo four moults before they become distinctly lobster-like, and begin to take a decided interest in the bottom. Then, as "lobsterlings," they can burrow in the sand and take advantage of the cover afforded by the rocks and the weeds.

Even then the many enemies which abound in the neighbourhood of the rocks, and on the shore generally, will continue to thin them out; but as the young lobsters grow they become less and less liable to destruction, and when they reach a size of a few inches they may be considered to be comparatively safe. They retain throughout life the retiring habits which offer so great a protection in their early days. It is only, therefore, when they venture from their hiding-places in quest of food that they run the risk of extinction from fishes big enough to tackle them, and evidence of this is almost lacking. Nature provides on a large scale, but it is a fact also that the immense supplies are necessary to counterbalance the equally immense destructive agencies which are at work. It is not right to talk about the great resources of the sea, and omit to take note of the vast expenditure. It may be taken as true that where a large number of eggs are provided, only one or two of these survive under ordinary circumstances at the age of maturity.

If it be granted, then, that during the pre-hatching stage the lobsters are free from danger, and that the death-rate is greatest immediately after hatching, and gradually becomes less intense thereafter, it follows that no method of hatching will ever be anything but a failure.

Indeed, artificial hatching is liable to the criticism that it is likely to be less effectual than leaving the matter to Nature. For, if the plan be only simply to impound the berried lobsters in ponds, and to allow the larvæ to disperse in the neighbouring waters, it is natural to suppose that the crowd of larvæ would attract the fishes to the feast provided for them. Again, in the case where the lobsters are artificially stripped of their eggs, the loss caused by the process of brushing must first be reckoned with, and in the second place, the artificial hatching in boxes and in jars is also less satisfactory than the natural process. It has also to be said that the pouring of a large number of newly-hatched fry into the sea will result, to a large extent, in feeding fishes and pelagic forms, which do not at all deserve this consideration, however important they may be. With these considerations before us, it is scarcely worth suggesting that it would be easier and better to retain the berried lobster, and to gather the pelagic larvæ as they are hatched. But such a means of saving some of the loss, and of obtaining as naturally-developed larvæ as possible, is of some degree of importance, if we view the work of the past as experimental, and feel that such methods are not to be condemned, although they have nothing yet to show for their existence. It must be remembered that success in things mundane is often reached after many attempts which have resulted in failure. The failures show what has to be avoided, and what has to be aimed at.

The main fault of the schemes at present in existence is the implanting of the fry at a time when they are the helpless prey of numerous enemies, and liberating them, moreover, in vast numbers at a time in a limited area. It is clear, therefore, that if cultural methods are to be applied for the improvement of a district, the time of liberation of the young lobsters must be postponed to the period which experience may prove to be the most economical, and some further consideration should be given likewise to the best manner of depositing them.

This has for some years been recognised in the States, and experiments have been made, in recent years on a large scale, to find out the best methods of rearing the larvæ up to the time when they take to the bottom. So far the results have shown that from 30 to 50 per cent., and even more with greater segregation, may be reared to this stage, and that thereafter the problem of rearing is much simpler. The apparatus yet appears,

however, to be too complicated, and if it be necessary, as the experimentalists say, to keep up a constant movement, something simpler and easier could surely be adopted than revolving fans placed inside canvas receptacles.

The opportunities for prosecuting this kind of work have been hitherto lacking in this country, but a beginning has been made in the well-appointed establishment recently opened at Port Erin. Experiments have also been conducted in connection with the laboratory of the Scottish Fishery Board at Aberdeen.

It is a matter of very great moment, however, for there are districts where this branch of the fishing industry is becoming more and more the mainstay of the inshore fishermen, and where further restrictive legislation is likely to prove a great hardship. Authorities recognising this are disposed to enquire as to the probable success of lobster culture, and the results are neither reassuring nor encouraging. But there is good reason for stating that a method of culture which, taking advantage of the profusion of eggs provided, and which has for its object the protection of

these, or their products rather, at a time when they are liable to destruction, would be as successful as hatching alone has proved the opposite. Even if a survival to the lobsterling stage of only 50 per cent. be all that can be hoped for, and if another 50 per cent. be lost in the attempt to keep them, say, over the succeeding winter, say, if even only 5 per cent. survived to this stage, the work would be more than justified. It has been estimated that a berried lobster carries about 40,000 eggs on the average. The survival from the pelagic stage already obtained by artificial rearing is, say, 20,000. If even 1,000 of that number were successfully reared to about a year old, and deposited with some degree of care in suitable localities, very few berried lobsters would be required to supply a district with as many lobsters as could be supported.

"Hatching," as a method of improving a lobster fishery, is and must always be an entirely futile effort, but "culture," it must be granted, possesses, at all events, the elements of success.

ALEXANDER MEEK.

LITTLE TERN.

THE little tern is the smallest of our British breeding terns. In Europe it has not such a northerly range as the Arctic and common terns, though it extends across the Continent to the Mediterranean, and eastward to the Black and Caspian Seas. It is also found nesting in Asia, in Northern India, as far East as Java, on the Atlantic coast, and on the north of Africa, while in winter it descends as far South as Cape Colony. Throughout the British Isles it nests in scattered colonies along most of our coasts, but the persistent deprivations of the egg-hunter have in many places caused former colonies to be deserted. To those of our coasts whose shores are flat and covered with sand and shingle the little terns resort from the South in May to lay their eggs. Colonies are to be found along the English Channel, from Kent northward to the Humber, and on the west in Cornwall, Wales, Lancashire, and Cumberland. In Scotland colonies are not so frequent, though they exist at the mouth of the Tay, in Aberdeenshire, in the Orkneys, on Tiree, and southwards in small and scattered colonies along the West Coast to the Solway. In Ireland the little tern nests in many places, and, though seldom in large numbers, it is satisfactory to know that they are increasing. The male and female are alike in plumage, except that the outer tail feathers of the female are scarcely so developed as those of the male.



LESSER TERN ON NEST.

Their small size distinguishes them from their frequent companions, the Arctic and common terns, as does also their conspicuous white forehead and yellow bill tipped with black; but in their habits they are much the same, though they are more often to be seen in pairs, and are seldom seen in such large flocks. The small size of the birds renders them less conspicuous, and they do not betray their nesting haunt by hovering over their nests in the same way as their larger cousins. The nest is often but a depression scraped in the sand, in which the two or three eggs are laid. These differ considerably in size and coloration, but are usually more oval than pyriform. In ground colour they are bluish, cream colour, or buff, with under-markings of lilac-grey, streaked and spotted with dark reddish brown, the whole often giving a wonderfully marble-like effect. Eggs without any markings whatever have been found, but these are rare. The nest is often found surrounded by a ring of broken shells of various hues, and some naturalists, who state that the little tern makes no nest, consider that these are old nests of the ringed plover (*Aegialitis Hiaticola*) which have been made use of; but in this opinion we do not agree. When at Killala, County Mayo, last year (1904) we found several nests on the sandy beach, which had no decorations of shells at all, while on a spur of rocks known as the Inch, and separated from the beach by a channel of the sea only some 300 yds across, we found all the nests situated



LAIID ON THE SAND.

among the rocks and seaweed practically composed of pieces of broken shells. About fourteen days is the period required for incubation, and the nestlings are of a pale sandy buff colour, spotted and streaked with black, with white under-parts. As they scurry over the sand they are quite difficult to make out, their downy plumage harmonising exactly with its surroundings. Having reached some convenient tuft of rushes, they squat down and almost bury their heads in the sand in their anxiety for concealment. The old birds feed them with young fish, shrimps, crabs, and marine insects. By the end of July the nestlings are gaining their full powers of flight, and by the end of September most of the little terns have left our shores on their southward migration. During our visit to Ireland we noticed that the Arctic and common terns hatched their young earlier than their smaller cousins, for we found hundreds of nestlings of the two former, and very few of the latter. It was a particularly beautiful sight to visit this terns' nesting-ground as the sun was setting. As we stood on the sandy beach, the sun sinking below the horizon to the west, touched with its expiring rays the white wings and bodies of the innumerable terns, painting them the palest shade of rosy pink as they hovered querulously over their nests. As they got accustomed to one's presence the terns would gradually drop down on to their nests, and for a moment all would be noiseless, and the whole colony, or rather the various colonies, would be still, when on a sudden some secret signal would seem to have been given, and with a roar of wings the terns would once more be in the air complaining as incessantly as ever. These silent moments were wonderfully impressive, and, as far as one could see, were unaccountable. Though the colonies of the Arctic and common terns were quite intermingled as regards nests, the little terns kept rather more to themselves, though in one nest of an Arctic tern we found an egg of a little tern, and every day we found that these eggs were warm, so that the Arctic tern had not deserted; and had we been staying long enough it would have been interesting to see how the foster-mother would have treated the little stranger. We took a photograph of this nest, as well as others showing a nest where the eggs were laid on the bare sand, and another where the nest is highly decorated with small shells. The photograph of the old bird on its nest was got by means of making a screen for the camera, as well as one for the photographer. Two hours' waiting cramped up in a very shallow trench dug out of the sand, with a sack thrown over one's body, gave the result shown. It was noticed that the birds dropped down on to their eggs, and did not run or walk on to them, as might have been expected; and it was certainly



EGGS IN A SETTING OF SHELLS.

a most fascinating experience to lie hidden in the centre of so animated a colony as that of the little terns.

IN THE GARDEN.

AMONGST THE ROSES.

AT this season of the year our thoughts turn to the Roses, and the prospects for the summer. Whether there is to be a rich abundance of flowers or not will depend not so much upon the weather that will be experienced within the next few weeks, but upon the previous treatment of the plants. What has been done in the past cannot be recalled, but a few hints now may be helpful to Rose-growers. The greatest insect pest is the familiar green-fly, and only the most careful watchfulness will keep this enemy in check, especially when a cold wind prevails. Each plant must be carefully examined almost daily, especially the weakly growths, which are the first to be attacked. The grower who knows his business will not need this advice, but will have prepared for the green-fly plague by keeping the shoots constantly syringed with clear water before it has had a chance of establishing itself on the tender shoots. Where it is thick upon the leaves prepare the following mixture: Dissolve one quart of soft soap in two quarts of boiling water. Remove it from the fire, and then add at once a pint of paraffin oil. This must be all thoroughly mixed together to form an emulsion. An addition of ten times the quantity of plain water will make a very good insecticide. A little stimulant to the root will be well repaid now, if it is carefully applied. Peruvian guano and fish manure may be recommended; but not oftener than once a fortnight, and then only a teaspoonful to each plant. A good liquid manure is made of cow manure, with sufficient water added to make the stimulant the colour of pale ale when poured round the stem. Frequent stirring of the soil in the Rose-beds is beneficial to the plants. Where Roses are planted against walls there is a danger of the flowers near them covering up the base of the stem and preventing the rains penetrating to the roots. Make a little cavity round the stem base, and give liquid manure at the interval mentioned. The Roses are coming on apace. Already Mme. Laurette Messimy and other hybrid China varieties are opening their first flowers, and in warm and favourable corners there is quite a display. The intending exhibitor will, of course, thin out the buds; but to achieve success at a modern Rose show demands a deep knowledge of Roses.

RANDOM NOTES.

A Hint to Rhododendron-growers.—The Rhododendron and Azalea are approaching their full flowering, and the recent hybrids have given a new interest to the family. We are so accustomed to the usual purple Rhododendron of the park that we are apt to forget the species and hybrids. The purport of this note is not to describe the Rhododendrons, but to advise those who have a choice collection to remove all the seed-pods after the fading of the flowers, and mulch the soil over the roots with farmyard manure. There is more in mulching than the beginner supposes, and in dry years, without this comforting surface of manure, many a tree and shrub would collapse.

A Beautiful New Clematis.—It will be pleasant news to the lovers of Clematis montana, the mountain Clematis, that is now hidden with its white flowers, to know that a variety of it is in existence. This was shown at a recent meeting of the Royal Horticultural Society,



LESSER TERN'S EGG IN CLUTCH OF ARCTIC TERN.

and is named Rubens. There is quite the character of *C. montana* in its variety—the same wonderful profusion of flowers, and the same vigorous and twining habit; but the flowers, though not differing in size, have a pale lilac-like shade towards the margins of the petals, which gives to them a refinement that few of the family possess. When the price is less prohibitive than it is at present, we hope to plant this beautiful addition to our climbing plants.

Preserving the Colours of Flowers.—We have been asked more than once lately the most successful way of preserving the colours of flowers, and the letters have been sent to a well-known authority for his advice. This is as follows: "I do not know of any very simple way in which the colours of all flowers can be retained in pressing; but most flowers can be satisfactorily pressed, and the colours sufficiently preserved for botanical and art study, if the process of pressing is conducted with patient care and judgment; in fact, a novice is certain to have failures, and success is only gained by experience. Select the flowers according to their succulency, and do not press the different kinds in the same sheets together. Rough blotting-paper is generally trustworthy, but it is better to have a fine smooth surface, such as is used for letter writing, for delicate plants of the nature, for example, of the *Oxalis*. Some flowers, the *Bluebells* for instance, are better when withered before pressing. Another point to observe with this kind of flower is to change the paper frequently, and gradually increase the pressure as the plant dries, and do not press a bunch of blossom, such as 'May,' together. Snip out the individual flowers and press separately, and then, when dry, arrange them together again. Thick stems should have a strip cut out of them before pressing; the cut side can be placed downwards when the final mounting on cartridge-paper is done.

no matter from what quarter they blow, have a most disastrous effect upon the graceful, grassy stems. One of the most interesting Bamboo gardens in the kingdom is at Kew, and the sorts that have proved the most hardy and beautiful are the following: *Phyllostachys Henonis*, *P. viridi-glaucescens*, *P. flexuosa*, *P. nigra*, *P. boryana*, *P. sulphurea*, *P. Marliacea*, *P. ruscifolia*, *P. Castillonis*, *Arundinaria nitida*, *A. japonica*, *A. auricoma*, *A. fastuosa*, *A. Simoni*, *A. Fortunei*, *A. anceps*, *A. Hindsii* variety *graminea*, *Bambusa palmata*, *B. tessellata*, and *B. marmorea*. In a well-known book on trees and shrubs it is mentioned that, in selecting a place for the Bamboo colony, the position should be well thought out. Luxuriant leafy stems are only possible when the plants are screened from wind, and, unless this protection is given, the foliage becomes brown and withered in March. Cold north and east winds are more harmful than severe frost, and this applies to all tender evergreens. A moist and rich soil is also important. Without it luxuriant growth is impossible, and a Bamboo that is not leafy, that does not bend its tall and graceful stems to the breeze and make willowy shoots yards high, when it is natural for it so to do, is not beautiful—the garden is more interesting without it. Many of the species spread rapidly by underground stems, and for this reason must never be planted without careful thought. Each plant should tell its own tale, and not suffer partial extinction through a choke-muddle arrangement that makes a bank of leafage, perhaps, but in which all individual beauty is hopelessly lost. Some Bamboos, like *Phyllostachys viridi-glaucescens* and *P. Henonis*, need ample space for full development. Always transplant in late spring, never in winter.

A Beautiful Primrose.—A colony of *Primula cortusoides* Sieboldi, which is the name of a charming variety of Japanese Primrose, is very bright in late



PYRUS FLORIBUNDA.

Many little devices like these are gained by experience, and in this, as in other things, practice makes perfect."

The Sweet William.—Among the many hardy plants approaching their flowering stage may be mentioned the Sweet William, or *Dianthus barbatus*, as it is called in technical books on gardening. This Pink, for such it is, came from the mountain meadows of South and Eastern Europe over 300 years ago, and there are many quaint illustrations of it in Parkinson's "Paradisus." It is what is known as a "biennial"; that is, the plant flowers the year after the seed is sown, and then is generally exhausted. Few biennials are more popular than this. The growth is strong, and many charming varieties have been raised during late years, such as the "Auricula-eyed," but the most effective in the garden are the pure self colours—crimson, white, rose, or salmon, and of this selection the salmon shades are the most pleasant to see, having a fresh and unusual effect when the plants are in groups. The seed of the Sweet William may be sown when ripe, which will be in late summer, in a selected spot out of doors, or in pots in a cold frame. Prick out the seedlings, when of sufficient size, outdoors, and transfer them to the border in autumn. Another way is to sow in March or in early April in a cold frame, prick out the seedlings in the usual way, and then transplant. Another way is to divide the tufts in September and by striking cuttings at this time from the half-ripened shoots. These should be dibbled in firmly under hand-glasses, watered carefully, and, when rooted, transplanted.

Planting Bamboos.—This is an excellent time for planting Bamboos, which have won the hearts of many gardeners through the extreme hardness of many of the most beautiful species. It is almost useless to plant Bamboos in exposed positions. Shelter is essential, and a well-drained soil; but winds,

May and early June, and it is well for those readers who have hitherto grown the plants in pots to know that it is quite hardy; but when plantings in the open air are contemplated ask for varieties with strong and decided colours, as these are less likely to suffer from rains and cold winds than the more delicate shades, in which the *Cortusoides* group abounds. There are many varieties, and we believe very few are unnamed. In a narrow border in our garden at least five different forms are in flower, one a dark crimson, three shades of purple, which we care least for, and one almost white. It is in narrow borders or in the rock garden that *Primula Sieboldi* makes the bravest show, the varieties there creating quite a pleasant break of colouring. Although this note concerns the flower out of doors, it forms a very cheery pot-plant in the greenhouse, and may be grown by the most ignorant in gardening matters.

Blue Pansies and Grey-leaved Shrubs.—It is not unusual to find in gardens a border of grey-leaved shrubs or hardy plants, the most beautiful of which are Rosemary, Lavender, and Santolina, with occasional free plantings of blue Pansies. We are writing from experience, having planted about 40ft. in length with the three shrubs named and the woolly, grey-foliaged *Stachys lanata*, the Siberian Scilla and blue Pansies intervening in quite a natural way, and with no attempt to create a formal design. The border is quite a success. In the background are groups of Mrs. Bosanquet, Mme. Eugene Resal, Mme. Laurette Messimy, and Fellerberg Roses. It is beautiful in winter also, as then the Rosemary and Lavender are as fresh and pleasant to see as in full summer. While writing of blue Pansies, we may mention another unusual association of colouring—blue Pansy and cardinal Lobelia, which is in perfection late in summer, at the time of the Lobelia's flowering.



AND when the Princess arrived at the palace she found all the doors wide open, and she passed through suites of magnificent rooms, looking out on gardens gay with flowers, but there was not a sign of any living being."

So ran the fairy tale of one's childhood, and the words come back as in the hot midday siesta one passes under the tall portico that divides the busy street just outside the Porta Salaria from the grounds of Villa Albani. The garden is aglow with flowers; "the halls are void, the doors are wide." We seem to have stepped into one of the enchanted palaces of fairyland, a place where the Princess might meet the Prince, where all is so unlike the commonplace scenes of the workaday world.

Villa Albani differs from other Italian residences in this—that it was built entirely with a view to the treasures it was to contain, and that even to-day, curtailed as those treasures are, it is impossible to think of it apart from them. The shining marble rooms, the long terraces, are peopled by a world of marble men and women, and they have, and need, no other inhabitants.

To no one in the eighteenth century does art owe more than to Cardinal Alexander Albani, whom his contemporaries called the Great Cardinal. His wondrous collection has rendered inestimable service to art and archæology. Since the time of Winckelmann, the distinguished German professor, under whose care the villa grew, there has been no student of the antique in Italy who has not found here a mine of riches on which to draw for explanation and illustration. No great writer has been able to tell the history of sculpture without at every moment quoting from Villa Albani. The successors of the Cardinal enriched the collection with a long list of precious paintings and drawings, and before the French bore away many of its possessions there were few places in which were gathered together so many examples of incontestable value and known history.

The Cardinal from his youth showed a wish to revive the love of art in Rome, and to turn back the thoughts of men to the beauties of a classic past. He treated professional buyers and excavators with the greatest esteem, and paid for everything really beautiful that was brought to his notice with regal munificence. In 1757 he met with Winckelmann, and was soon attracted by his critical faculty and artistic knowledge; the following year he offered him a salary and lodgings in his palace in Rome. He gave him fine rooms with beautiful views. His only duties were to be a companion to the Cardinal, and to look after his library. He passed his time going with the Cardinal to examine ruins and to consider the positions of statues, and became so intimate with him that he often went to chat at his bedside. He threw himself enthusiastically into his patron's favourite pursuit, and it seemed as if he built and bought for himself.

The villa is believed to have been built from the Cardinal's own designs carried out by Carlo Marchionni. It consists of a lofty two-storied palace, with an open loggia on the ground floor, arcades sweeping away on either hand, at the back of which are small apartments and alcoves, and on the other side of the garden a sort of casino with another curving loggia. "Here is a villa of exquisite design, planned by a profound antiquary. Here Cardinal Albani, having spent his life in collecting ancient sculpture, formed such porticoes and such saloons to receive it as an ancient Roman might have done, porticoes where the statues stood free upon the pavements, saloons which were not stocked but embellished, and seemed full without a crowd."

Winckelmann, in his letters, gives us continual accounts of the rise and progress of this splendid collection, and speaks affectionately of the goodness and loyalty of heart of its owner. "What manner of man is he? do you ask," he writes to a friend. "He is a man who to great talents joins the most amiable of characters. He is sixty-three, but does not look forty, and he builds as if he were sure of living for another twenty-five years. His villa surpasses everything of modern times, except St. Peter's itself. He has erected the background he needed, and has been himself the sole architect." "This Cardinal is the greatest antiquary in the world. He brings to light what has been

buried in darkness, and pays for it with a generosity worthy of a king." In February, 1758, he writes: "The palace is adorned with such a quantity of columns of porphyry, granite, and oriental alabaster that before they were put in their appointed places they seemed like a forest of marble." There are, in fact, one hundred and forty-four. The noble portico is supported on thirty-six of oriental granite and forty small ones, beautifully polished. Another writer says that the Cardinal's nobility of soul made him so beloved that he was often given, or helped to find, things that might otherwise have escaped him. Immediately within the entrance we come upon a series of box avenues, all converging towards a circle formed by eleven splendid pines, which stand round a space in the middle of which an antique obelisk is the central feature. About it there is a curious story. It belonged to the Prince of Palestrina, who refused to sell it to the Cardinal at any price. Shortly after, the Prince went on a journey, whereupon the Cardinal sent a large body of men, who entered the garden by force, bore off the obelisk, and placed it in the gardens of the Villa Albani. As the Cardinal was excessively powerful in Rome, the Prince did not dare to bring an action against him, but made a joke of the whole affair, complimenting him on his exploit, and remaining upon friendly terms. It is now surmounted by the mount and star of the Albani family, and stands out beautifully against a group of cypresses and a background of far blue mountains. Close-cut hedges of cypress, set with busts and terminal figures, screen the approach to the great formal garden which lies in front of the villa. The casino opposite is ablaze with masses of azaleas. "It is roses, roses all the way" in the long flower-beds, flanked by pots of lemon and orange trees, noble fountains make a centre here and there, a river god reclines under a portico, for which we can find the original drawing of Marchionni in an old book on the table within. In one of his letters Winckelmann says: "The Cardinal has brought from Tivoli on a *carro* drawn by sixteen bullocks a female river deity of colossal size, well preserved," and here, sure enough, she is, reclining on the edge of a marble reservoir. "I write from our villa, which grows more beautiful every day," he says; "one of the last acquisitions is a colossal head of Trajan, in perfect preservation except the nose." The nose has been restored, and the colossal bust looms from a bower of honeysuckle. "The Cardinal has just brought to his villa the few last of the best statues left in the Villa d'Este, at Tivoli."

The lower storey of the villa is faced by a spacious open colonnade, which runs its whole length, and along which stand statues and vases. We can see, midway, a beautiful reclining statue of Agrippina.

Within doors the rooms are gleaming with marble, rich with gilding, and are still rich in masterpieces of painting and sculpture. One of Perugino's most exquisite panel paintings glows upon the wall; above one mantel-piece is framed the splendid sulky Antinous, crowned with lotus blossom; over another is that most lovely and delicate bas-relief of the parting of Orpheus and Eurydice; archaic Greek reliefs, fine Roman work, alabaster vases, sarcophagi, statuettes, frescoes, are placed with thought and care whichever way you turn; bits of exquisite classic carving are let in as overdoors; everywhere inscriptions tell us how Alexander Albani built and adorned the edifice, and how Alexander Torlonia restored it in 1871.

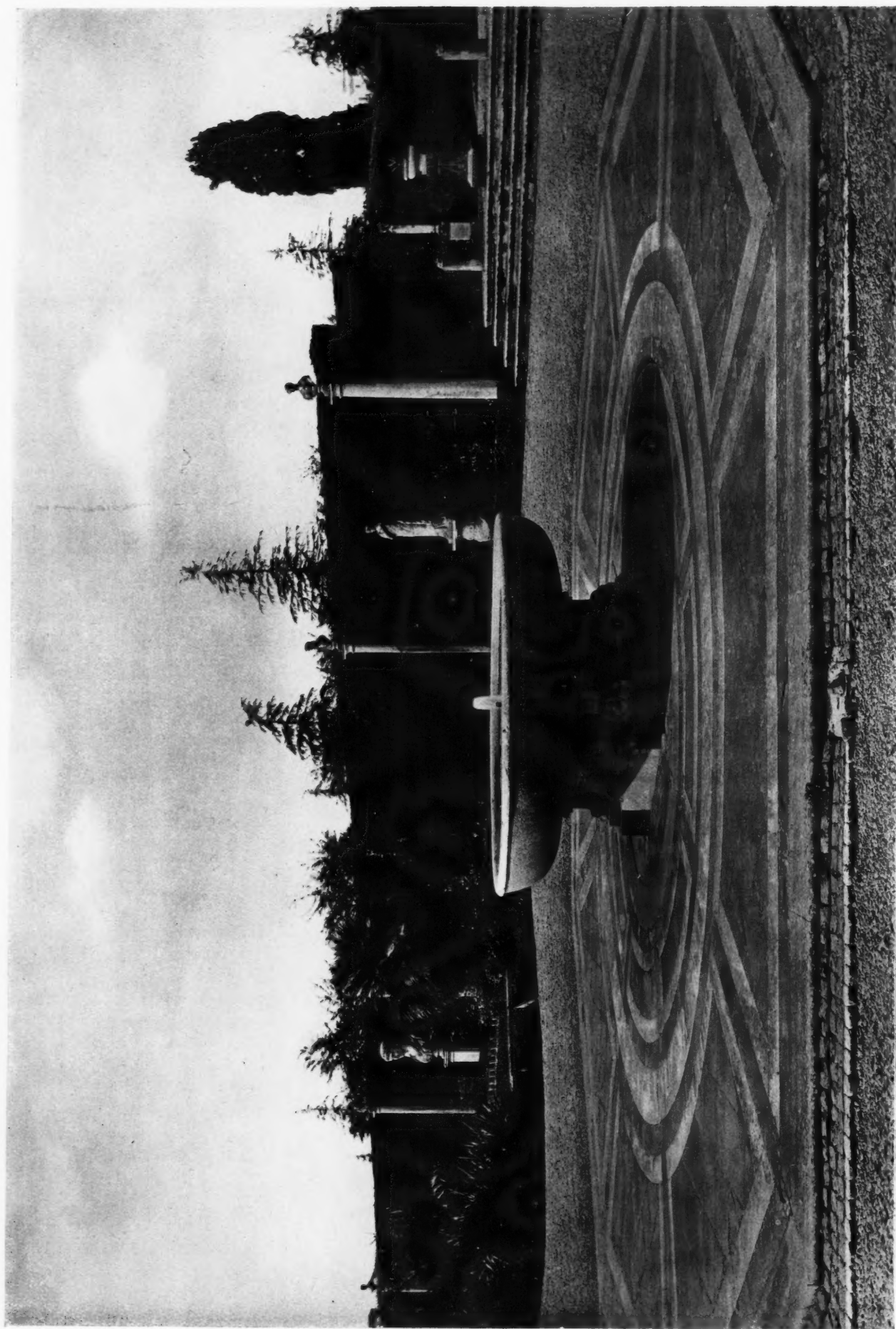
Winckelmann speaks of many beautiful things which have since disappeared, 294 of the finest specimens having been carried off in the French invasion. He tells us, too, of the English visitors whom the Cardinal entertained—Milady Montagu, Milady Bute, Lord Baltimore, and "the celebrated and famous Wilkes of England." He speaks of the head of a Pallas, which he holds to be the most perfect beauty under the sun, but which was snapped up while he was thinking about the price, and tells us he has become so wrapped up in the villa that he cannot bear anyone to visit it without him, and when a German count wanted to go and visit it with one of his acquaintances, he said, "No! plump."



THE ENTRANCE.

"COUNTRY LIFE."

Copyright



"COUNTRY LIFE."

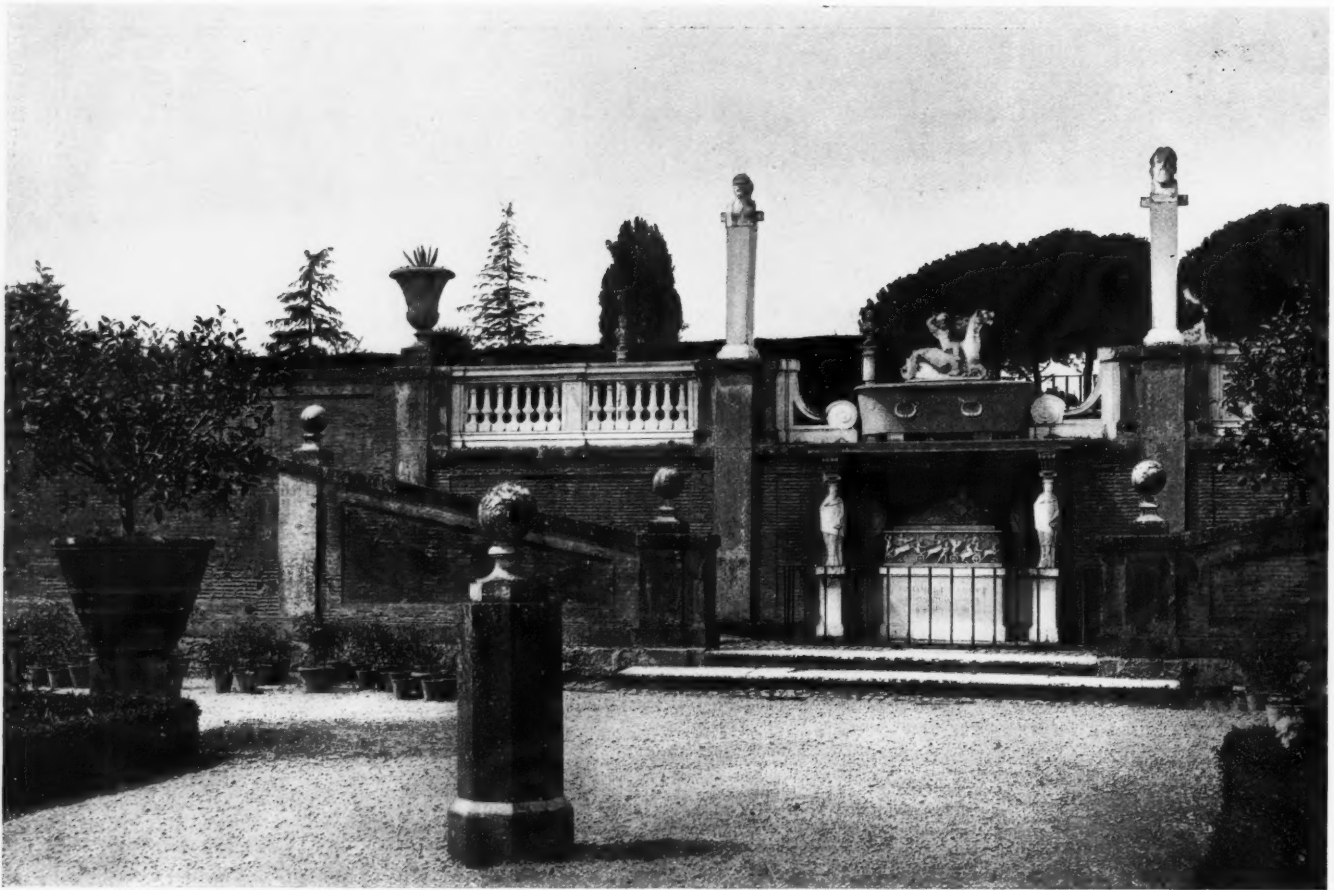
IN MOSAIC SETTING.

Copyright



THE SOUTH TERRACE.

"COUNTRY LIFE."



Copyright

MARBLE AND STONE.

"COUNTRY LIFE."



Copyright

A SIDE PATH.

"COUNTRY LIFE."



Copyright

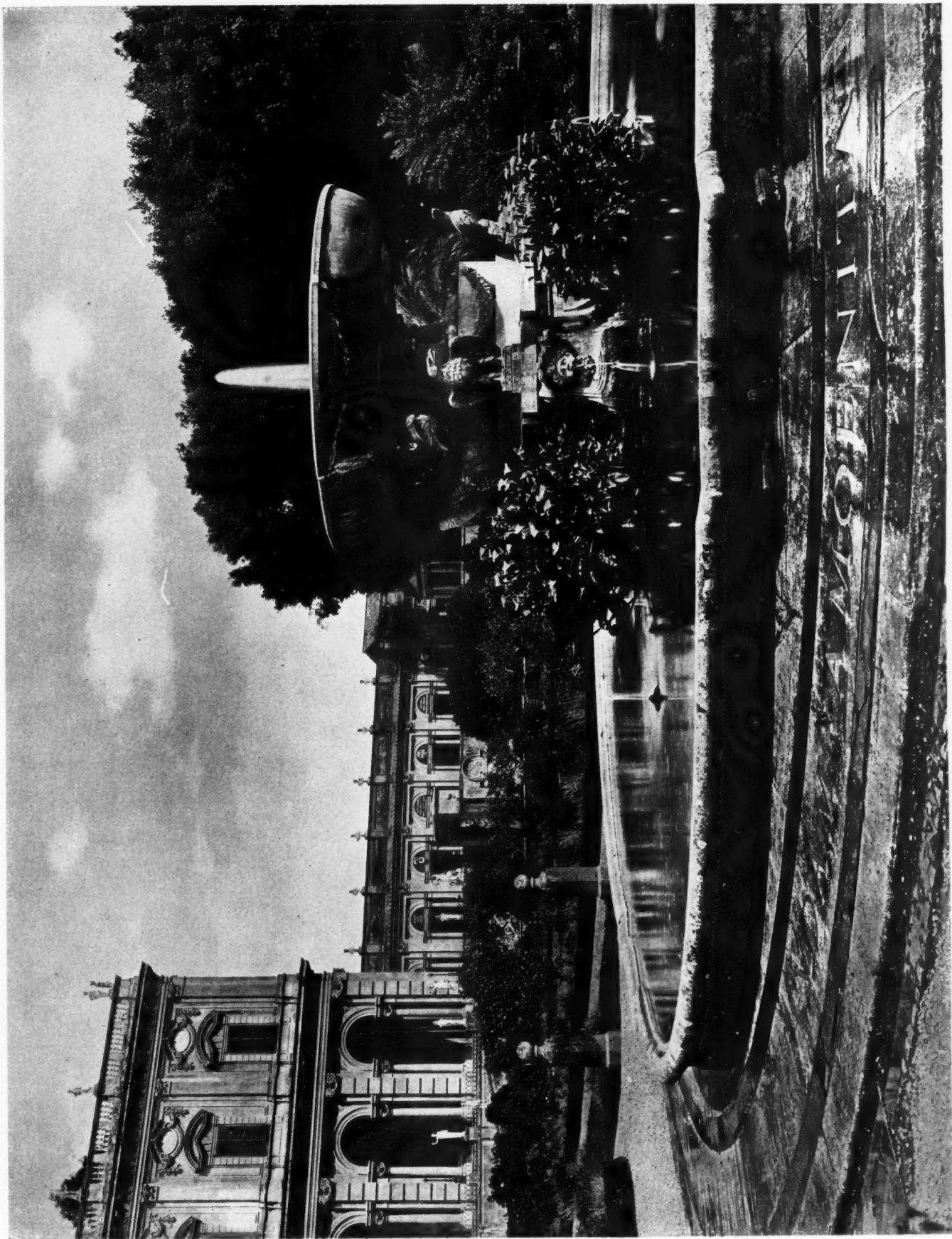
A MARBLE TEMPLE.

"COUNTRY LIFE."



"COUNTRY LIFE."

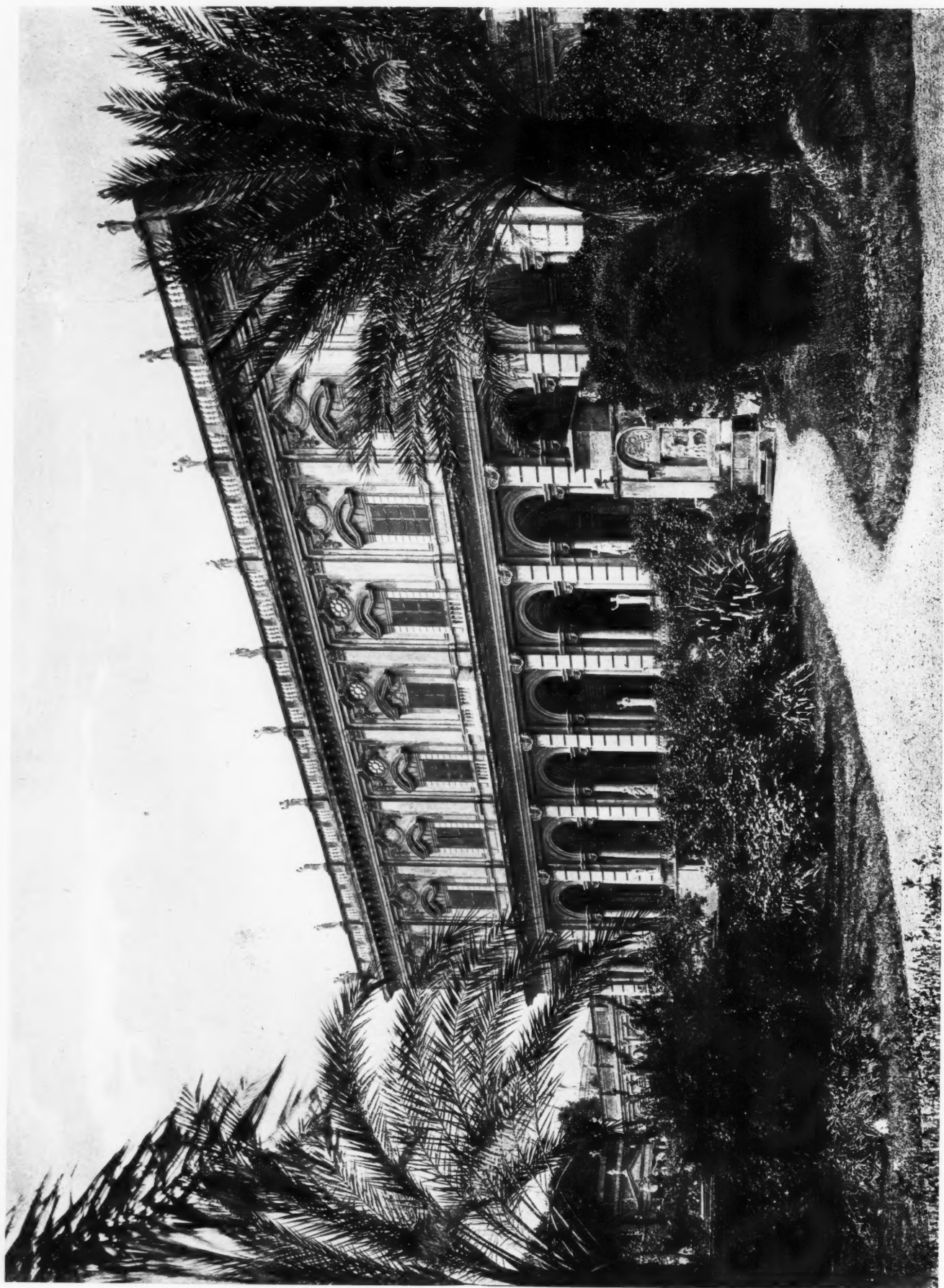
CYPRESS HEDGES.



THE CENTRAL FOUNTAIN.

"COUNTRY LIFE."

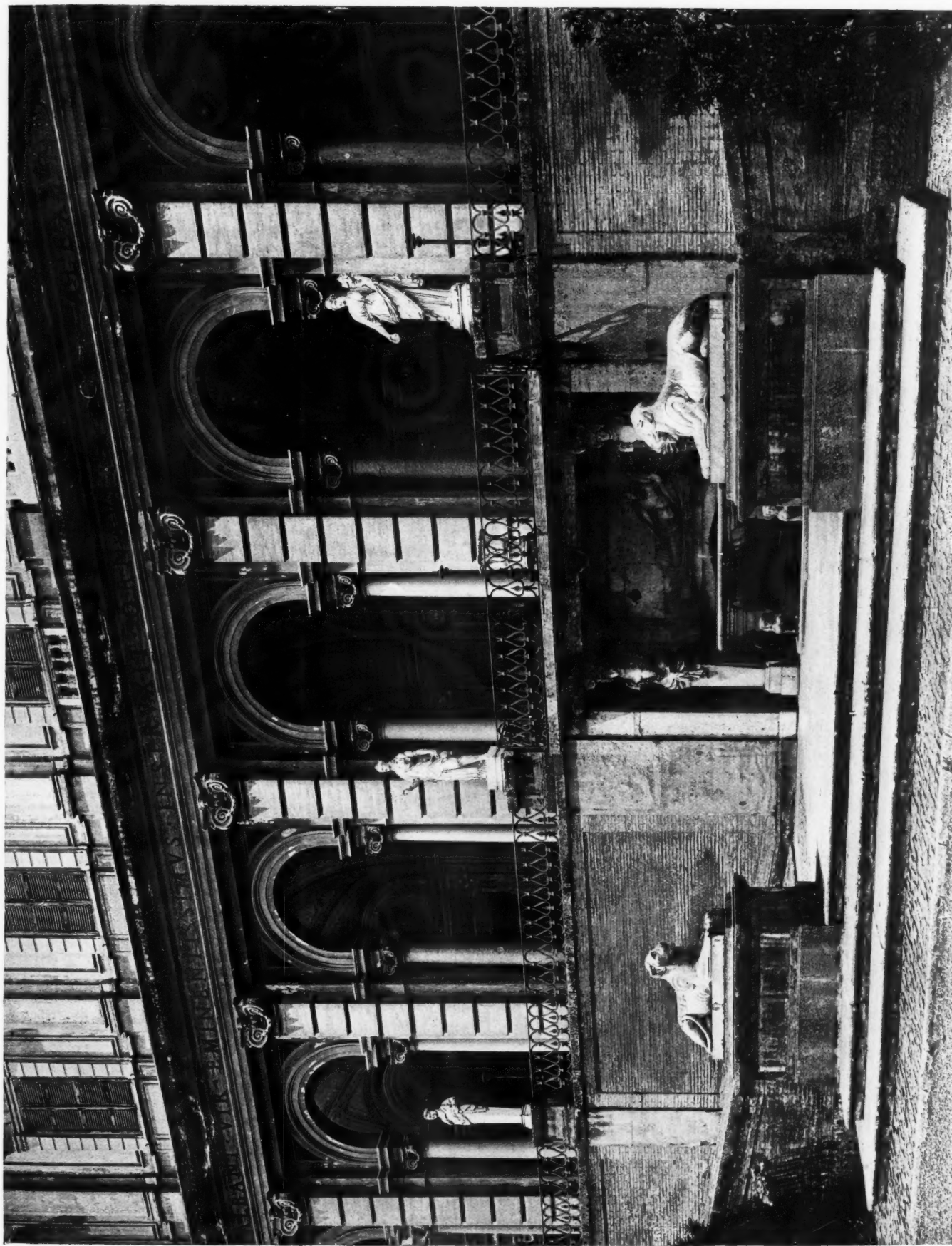
Copyright



Copyright

THE VILLA.

COUNTRY LIFE."



THE SOUTH TERRACE ASCENT.

Copyright

"COUNTRY LIFE."

COUNTRY LIFE."

THE VILLA.



Copyright

JUNO AND JUPITER.

"COUNTRY LIFE."

A BOOK OF THE WEEK.

ROMANCE conveyed realistically might serve as an accurate description of the most recent volume issued by the Hakluyt Society. It is called *Early Dutch and English Voyages to Spitsbergen in the Seventeenth Century*, edited, with introduction and notes, by Sir Martin Conway. The discovery of Spitsbergen dates from 1596, when it was found by two Dutch vessels, and was subsequently visited in 1607 by Henry Hudson, of whose voyage an obscure account was printed by Purchas. It speedily became a centre for whaling expeditions. Gerritsz's description naturally occupies a foremost place in the volume. He had much to say that was interesting concerning the natural history of Spitsbergen; it containing "white bears larger than oxen, which also take very well to the water"; deer having "hairy horns, and are a little smaller than our deer." The small animals were white and grey foxes, and also some black ones. The discoverers of the place also found what they called "unicorns' horns." At the mouths of the ports and harbours there was an abundance of whales, "the majority of which are more than 80ft. in length, and all are very fat." The fowls were mostly gulls, "which descend in large numbers on the carcasses of the whales." There were also "sea-parrots, goslings, and ducks, which lay very large eggs." A little further inland was an abundance of walruses, which the English called sea-horses, but the French sea-cows. Seals, too, were found in great numbers. The second paper in the book is from "The State Papers, Domestic, James I., September, 1618," and is called "Troubles at Spitsbergen, 1618." There was great rivalry between the English and the Flemings, who seemed always ready to take umbrage one at the other. The sort of incident that happened may be judged from the following account of one of the quarrels:

"The generall commaunded us to take in our flagge. Answer was made him by William Heley it should firste blowe from the staffe, and that before we would yield we would die in defence of His Ma'ties righte and savegarde of that we had, and that they should either sinke or burne us before they had it, telling them in regarde they would shew noe Comission nor authoritie for what they wente about we could accompte them no other then pirates. And desired them to let us call in our men: that were abroad in shallops three or four leagues from the shipp plyinge our voiage, and but twelve houres time to fit our shipp, and then two or three of the best of them come and win it from us if needs they would have it, or give us time to send to our Admirall; they

answered noe, what need that they woulde allowe us halfe an houre, and before we went of from their shipp side, they had laid out two warps, one from the generall and the other from Cock, and so heaved aboarde of us and there offered with weapons drawne to enter our shipp, shee beeing all open and unpriddy, and very few men aboarde of her, rideinge with yarges and topmasts downe, yet not likeinge so well to enter they fell from the side again and continued their warps fast till the 18th day at night, and their beeing much winde we sent for some of our sea-men that were neere hande to come aboarde, who presently hauled up their boates and came by lande, a very bad journey."

Many of the adventures in this distant land are pathetic to read of now. The sailors suffered severely from the scourge of scurvy. This is exemplified very painfully in a chapter called "A Short Journal of Seven Other Seamen, who being left in 1634 at Spitsbergen to pass the winter, died there in 1635." We hear about the preparation of "all manner of necessaries," which seem to have consisted of meat, drink, physical preparations, herbs, etc. From September 11th their troubles appear to have begun. They saw many whales, at which they discharged their guns, but did not take any. They went also in search of green herbs, foxes, and bears, but met with none. On November 24th the scurvy began to appear among them; and we are told they searched very earnestly "after green herbs, bears, and foxes, but to their great grief could find neither of them." For the next fortnight they had a very bad time, and on November 11th "they resolved for the future everyone to eat separately from the other, some being not so much afflicted with the scurvy as the rest." The tale is subsequently one of repeated disappointments:

"the cook was throwing out some water, he saw a bear just by the hut, but he ran away at the noise, before they could come at their guns. The 24th, they discovered another bear; three of them advancing towards him, he rose upon his hindmost legs, and being shot through the body by one of our gurs, he began to bleed and to roar, and to bite one of our halberts with a great deal of fierceness; but finding us too hard for him, he betook to his legs. Being excessive eager after some fresh meat (of which we stood in great need for the recovery of our health), we pursued him with lanterns and candles a great way, but to our sorrow could not overtake him."

They lingered on till January, and on the 28th of that month saw the first fox, but could not take him. By that time three of the seven had died, among them being Cornelius Thyse, "being the man of all the rest in whom they had put their most hopes next to God." They still lingered on till the end of February,

when, with the remainder of their strength, they indited the memorial that was left behind them :

"Four of us that are still alive, lie flat upon the ground in our huts ; we believe we could still feed, were there but one among us that could stir out of his hut to get us some fowl, but nobody is able to stir for pain. We spend our time in constant prayer, to implore God's mercy to deliver us out of this misery, being ready whenever He pleases to call us. We are certainly not in a condition to live thus long without food or fire, and cannot assist one another in our mutual afflictions, but must every one bear our own burthen."

The bodies were found in 1635, the men having shut themselves up in their tent before dying, lest the bears should eat their carcases. Three of the bodies were found in coffins, each in a cabin, the other two upon some sails upon the floor with their knees drawn up to their chins. The incident vividly illustrates the sternness of the task the men had set themselves to do. In those days the fight with animals was not looked upon as sport, but a hard struggle for food. In the *Journal of Van der Brugge* we find many vivid sketches of fights with wild animals. Here is one, dated March, 1634 :

"In the afternoon, intending to go to the strand, I perceived a great bear near the W. side of our tent, wherefore I again went inside. As I took the gun in my hand, in order to shoot, the bear retreated behind the tent, but I sent two balls into him near his jawbone. He immediately fell down, stretching out his fore-paws to his head ; we ran out to him with lances, and gave him some thrusts in the body ; but since we did not hit him well, and as he was also enraged by the barking of the dogs, he got up again. Aleff Wilhelmsz, desiring to thrust at him again, had his lance rendered useless, the bear springing towards him. The man began to shout, and fell down, whereupon Jan Kunst ran up to rescue his comrade. The said bear made such a to-do with howling and springing, that he still escaped us, and remained standing some time longer on the ice-floes out bay-wards. We had never had such a hard set-to with bears. We found

the slime of his snout on our comrade's clothes behind, so that we could not longer have put off rescuing him : wherefore God be thanked !"

This *Journal* is remarkably interesting in every part of it, and not least so in its chronicle of what might appear to us somewhat trivial accidents, which, however, had great import for the poor people there. Thus we are told that in 1633 "by an accident to our cook our drinking can got broken, which will cause us serious embarrassment." A few days after "our three chickens died, one of which we had hoped to enjoy on Sunday." Sometimes we get a hint of the hardships that had to be endured, as when "early in the evening we nailed up the bottom door of our tent by reason of the great cold that came through it into the tent on to our feet." Here is an incident that must have been typical of many others :

"In the evening of this day we started upon another cask of beer : this we found to be entirely frozen, and broke it open, cutting up the ice with saws and other things. On its being melted, we put it into another cask we had got ready, in order that we might draw off the best and the worst together ; this we placed in our living tent, about three paces from the fire, intending to keep it melted."

With another extract, dealing with a night adventure, we must close our account of this fascinating book :

"On the 11th, the wind was S.W., with dark weather. In the afternoon the barking of the dogs made us aware of a bear being near our tent. This, after much shooting and many thrusts with our lances, we killed at some distance behind our tent. The darkness, and the unevenness of the snow, made it very dangerous and difficult for us, and nearly all our lances were bent, broken into pieces, and rendered unserviceable. Immediately after his death, the said bear was skinned, and the skin and fat taken care of by us. By reason of the darkness, we managed to do this with the aid of lanterns and burning candles, whilst we had our lances and guns lying around us, in order to defend ourselves with them if necessary."

OUR WILD SINGING BIRDS.

TO one who has been long in city pent, it is always a matter for deep regret that the spring slips past so rapidly and so quietly. There was a time when the present writer scarcely missed an hour of it. He was in the open air from morning till night, and without keeping any written calendar noted each step of the advancing season, from the appearance of the first tender spray of the honeysuckle, until woodland and field and hedgerow were all gay and shining with flowers. And the birds, too, were watched as closely. They were regarded almost as flying blossoms.

First of all, even when the snow was still on the ground, and the last blasts of winter were sweeping hill and field, that bird of joyful note, the missel-thrush, perched on the very top of some tall tree, would pour forth his melody as if knowing by some instinct of his own that the stern season of the year was giving way to the happy and joyous spring. His, too, was frequently the first nest to be found, and how pleasant it was to find it in some heap of cut thorns or in the middle of a bush. The bird is a very brave one, and this year we found a nest on the ground, close by a main road, early in March. The occurrence in the writer's experience is unprecedented, though probably other observers may have made similar discoveries ; but the bird was hatching out her young by the roadside, although birds'-nesting children passed and repassed daily. There were also houses close by, with cats and dogs that went out on the prow! seeking what they might devour, and stoats and weasels

have even been seen near the place ; yet apparently the very boldness of this bird seemed to prove its salvation, and it would appear to be equally true of the thrush as it is of game birds, that during the period of incubation they have no perceptible scent. Otherwise it would be almost miraculous that this

bird should have escaped destruction. The hen would sit on the eggs and brood her young until one came within two or three feet of her, and she had almost to be touched before getting off. When she did so, however, she flew away with no loud shriek of alarm, as birds often do, but as silently and stealthily as a rat. The storm-cock, as he is called in the North, is the earliest of our minstrels, but he is not such a popular favourite as the beautiful little speckled song-thrush. This is a very delicate bird, and

some years ago, when we had a succession of hard winters, was in danger of becoming altogether exterminated. But the mild seasons we have gone through recently have enabled it once more to recuperate, and the thrush is to-day more numerous in the land than ever. It is no great favourite with gardeners, as, though it destroys a certain number of slugs and snails—and very pretty it is indeed to see it breaking the shells on a stone—yet it takes tithe of the fruit too. Still, it is one of the creatures that deserve their pilferings. Whoever cares for Nature at all would gladly give it a share of the garden produce for the sake of its appearance as it hops about on the lawn or gravel path, and also for the music it discourses so sweetly. And the same plea might be put in for the blackbird, surely as sweet a singer as we have in England. The cock is a much more beautiful bird than the ordinary observer gives him credit for being. Shakespeare's description, "the ousel with orange tawny bill," is still unrivalled. It pictures this bird in a single phrase. The hen is of a more sober colour, and is one of the most confiding birds. In the days of



NIGHTINGALE.



BLACKCAP.



SONG-THRUSH.

our boyhood, when birds were recklessly snared for the mere purpose of catching them, the hen blackbird was always one of the easiest to take, while it was very rare indeed that one caught a male of this species.

A very interesting subject to investigate would be the development of the nest. Why should that of the thrush be so much more carefully built than that of the blackbird; and who teaches the young bird to line its nest with dung or clay? The answer given to such a query as proposed is usually "instinct," but this word does not take us far, because it is just the analysis of what instinct really is that is interesting. A song-bird that does not appear to be quite so plentiful as it used to be is the chaffinch, another species which builds a most beautiful little nest. We suppose that it really takes the material that comes handiest, but the result is often very baffling. The nest frequently is on the side of a tree, and constructed of the very moss or lichen which grows on the trunk. Very seldom would it be discovered were it not for the characteristic habits of the bird. No sooner does anyone approach its tiny mansion than it utters its "twink-twink" of alarm, and the search after that becomes like a game of hide-and-seek, in which the bird shrieks loudly when one comes near, growing more faint when one is at a distance, just as children in a game of hide-and-seek cry "hot" or "cold." Its song is one of the briefest, but one of the sweetest conceivable, and that perhaps is why it is such a favourite with the city poor, though another reason might be given.

The chaffinch is one of the longest lived of our little birds, records being extant of one living in confinement for



STARLING.

twenty years, and, of course, in that time it grows to be almost a part of the family. In the matter of longevity there are the greatest differences in pets. The bullfinch, for example, does not seem to live long, and it is very rare for one to survive more than two or three years in captivity. Probably some of the great scientific men who have been working on the subject, and have discovered that length of life depends a great deal on the alimentary canal, might be able to give some explanation of these differences. It is to be hoped that they do not assume all birds to be long lived, as the small songsters, in this respect, vary quite as much as flowers and plants do. Yet even upon a simple point like this we are compelled to resort to speculation, since anything kept in confinement may perish because of the conditions, and not because it has lived its natural period. All that we can say with certainty is that some birds have been known to keep alive for a very long time. Instances could easily be got together by searching our pages. At the present moment we know of several seagulls that have been kept for periods ranging from ten to thirty years in a garden or a poultry-yard. At Warwick Castle there is a peacock which, we believe, was given to Lady Warwick by the late Lord Beaconsfield, and it can be traced back for 100 years. Ravens



BLACKBIRD.

and jackdaws have also been known to live a long while in confinement. Many song-birds, besides the chaffinch to which we have alluded, such as the linnet, will live a long time, but the opposite is the case with blackbirds and thrushes and nearly all kinds of finches.

A word must be said about our migrants. This year they are far less numerous than usual, and nobody appears to be able to give a satisfactory reason. The swallow, the most graceful though not the most musical, is positively scarce in comparison with what it used to be. A theory has been put forth that it has been ousted by the sparrows, who have driven it from its nesting-places, and it is, undoubtedly, true that some birds find it difficult to secure building sites. Amusing proof of this may be seen on the golf course at the Ranelagh Club. For some reason or other they have dug a deep pit in front of the bunker at the thirteenth hole, and in the sides of this the little sand-martins have already excavated holes, and may be seen popping out and in—a pathetic testimony to the difficulty experienced by these birds in finding breeding-places. But it cannot be any obstacle of this kind that has prevented the cuckoo from coming to England this year in its usual numbers, since the cuckoo makes no nest whatever. Yet every resident in the country will bear witness that its cry has this year become rarer than we have

known it to be for many years past. And from what we hear, the nightingale, too, has come only in small numbers. Thus some general cause would appear to have affected the movements of our small migrants.

ARRANGEMENT OF CUT FLOWERS.

WITH the pronounced revival of most forms of applied art that the last ten years have witnessed, it is a little surprising that taste in the exercise of one of the most practised of the arts—that of flower arrangement—has been educated to so small an extent. This is the more to be wondered at, in that the last ten years have seen also an extension of garden-worship almost unprecedented. Moreover, seeing that Japanese influence on many of our arts—perhaps less on the applied than on the pure—has been so great, one would have anticipated that the same influence would tell more powerfully than has been the case in this matter of the decorative uses of cut flowers. For the Japanese, alone among the peoples of the earth, have given to this art serious attention and study, treating it with the same spirit of earnestness and reality as that with which our finer artists and craftsmen now treat such once-despised things as furniture-designing and minor architecture generally. But in England, even now, the only idea of floral arrangement that most people possess is that of cutting the stems of a miscellaneous assortment of flowers to a uniform length and plunging them into the first highly-coloured and over-decorated vase which catches the eye. No one would imagine that each of the flowers thus treated had once an individual soul and a beauty and grace peculiarly its own. To the ordinary housewife, and equally to her Goodman, flowers are flowers, and there's an end to it.

The very essence of success in flower arrangement is that the composition shall suggest the individual habit and grace and beauty of the plant whose parts are represented. It is, therefore, obvious that no one can attain to anything but absurdity in this art who is unfamiliar with living and naturally-growing plants. For it is not flowers only that constitute the beauty of plant life, but stem and leaf, bud and fruit—each and all are full of beauty, association, and significance.

As a general rule—and as a universal rule in dealing with small compositions—it may be laid down that only flowers of one species should be employed, and that only the leaves and other parts of plants belonging to that species should accompany the flowers. In rare cases, in large and complicated arrangements, two or more species associated together in Nature and in sentiment—as are primroses and violets, or buttercups and daisies, for example—may be employed. Such, however, should only be attempted by the more experienced.

I am writing in the house of a charming lady



BULLFINCH.

whose friendship I value, and she, knowing my love of flowers, has placed on the table before me a vase containing blooms of exquisite beauty. Have you, dear reader, ever experienced the awful feeling that rises in one when present at some well-acted tragic play, which the audience mistakes for farce, exploding in hearty laughter just as one's whole being is rent by restrained sobs? Probably you have. Well, that feeling is similar to mine as my eyes meet the vase of flowers before me. Lilac and pansies and German iris in about equal parts crowd together after the manner of a showman's happy family. Think of it! and excuse me from making comment. Not only should each composition usually consist entirely of flowers of a single species, but, as a rule, only flowers of one colour should be used. This rule is not absolute, and occasionally quite beautiful effects may be obtained by blending variously-coloured sweet peas, or roses, or certain other flowers; but such cases are exceptional.

As a general rule, flowers should be arranged much more loosely than is customary in Western countries. By undue crowding of the flowers all individuality and beauty of form and habit are lost, and a mere blob of colour results. The closeness of the arrangement, the proportion and relation of flowers to leaves, and the general grouping should vary with the flower employed, and should be based entirely on a study of the natural habit of the plant.

The vases, bowls, jars, or other vessels used for cut flowers should, in like manner, vary with the structure and habit of the particular flower; for a jar that might be admirably adapted, let us say, to serve as the base of a primrose composition, would for that very reason be utterly unfit for use with daffodils or irises; and a bowl that lends itself exactly to association with roses would certainly be quite the wrong vessel to contain

lilies of the valley or Shirley poppies. Consideration of a few special flowers of the season will help us to understand the principles laid down above. Irises, for example, are arranged in two very distinct ways, either of which is usually possible with flowers, such as irises and daffodils, which grow in vertical lines. One way is to use a tall slim vessel which, like the flowers it contains, suggests vertical lines, and to allow the flower-stems to rise from its centre as a sort of secret within a secret. The other way is to use a flat shallow bowl, and, with the aid of a folded strip of lead, arrange the irises so that their stems rise vertically from the surface of the water as they do in Nature from the surface of the soil. This sort of arrangement yields a sensation of considerable coolness, on account of the water which forms so prominent a feature of the composition—no mean consideration in the hot days of summer.

Roses, again, may be arranged in various ways. In arranging a bowl of roses, a form full of pleasant and romantic association, it is well to make a much freer use of foliage than



MISSLE-THRUSH.

is customary, and the whole should be kept as loose and free from crowding as possible. Ten to twelve roses, with plenty of foliage, are as many as should be used for a bowl of gin. diameter, and fewer flowers will suffice.

Another arrangement, only applicable when the roses have been cut with very long stems, is to place them loosely in a tall narrow vessel slightly expanding at the summit. The total effect is somewhat similar to that produced by a standard rose tree in bloom, though it has justification, quite apart from its resemblance to that conventionalised form of plant, for it has

its analogue in the picture, often shown in our hedgerows, of a briar struggling up through a thicket of undergrowth, reaching the light only at the summit, there to break forth into a crown of glorious bloom.

There is a large group of early summer flowers, whose form and habit suggest breadth, rotundity, and dumpiness, rather than slimness, height, or length. A vase suggesting dumpiness and rotundity is therefore appropriate, and geometrical symmetry rather than a symmetrical balance is to be aimed at in the composition.

THE RAREST REPTILE IN ENGLAND.

OUT of the total of six reptiles which occur in England, three lizards and three snakes, two of them are conspicuous by their absence from most districts. These two are far less common than the other four, and, curiously enough, they are found generally in the same localities. I refer, of course, to the rarest of the English lizards, the sand-lizard (*Lacerta agilis*), and to the very rare smooth snake (*Coronella austriaca*). The distribution of these two reptiles in this country is an extremely curious one. In the South of England they both occur together in the same few restricted habitats, the snake feeding upon the lizard. But the distribution of the sand-lizard differs from that of the smooth snake, inasmuch as the lizard is found in considerable abundance in one part of the North of England, namely, on the sand-hills in the neighbourhood of Southport, and for a certain distance along the coast from that town. In this area the smooth snake is not found at all, and for this reason it justifies the description of it as the rarest reptile in England.

On the European continent this species is fairly common in the central and southern countries. In England it occurs in only four counties at the most, these being Dorset, Hampshire, Surrey, and Berks. An interesting fact in connection with the smooth snake is its comparatively recent addition to the British fauna. The first undoubted capture of a British specimen was in June, 1853, by Mr. Frederick Bond, who in company with the Rev. O. Pickard Cambridge was entomologising on the borders of Parley Heath, between Wimborne and Ringwood. Mr. Bond took the specimen to London with the intention of having it identified at South Kensington, but, curiously enough, having preserved it, he forgot all about it. Six years later, in 1859, the capture of a specimen by the Hon. Arthur Russell, near Bournemouth, was recorded in the *Zoologist*. Mr. Bond read this announcement, and immediately recognised the description as being that of the species he had taken six years previously.



TWO STAGES OF FEEDING.

He searched out his specimen, and sent it to the museum, where its identity was established. Mr. Cambridge subsequently recorded it several times from Dorset, especially noticing that in the year 1879 it was unusually frequent on Bloxworth Heath. Mr. Frank Buckland recorded it in the *Field* from the New Forest, and, in the *Surrey Magazine* of 1899, Mr. Bryan Hook noted the first record of the smooth snake from that county, which he took in 1891. This specimen was killed in mistake for an adder, a fate that in all probability overtakes most smooth snakes in this country. Years ago—about the year 1868—Mr. Baldry recorded that the smooth snake was very abundant in the neighbourhood of Bournemouth, but, as the moorland there has been covered by buildings, the snake has disappeared from its haunts in this locality.

The history of its occurrence in Berkshire is also curious. Mr. J. L. Bevir of Wellington College says that some twenty-five years ago no less than five specimens were brought to him by the boys in one season. It must have been fairly abundant for this to happen. But then for years it was never seen in Berks at all, and its subsequent appearance was only in the year before last. A short time before this recent record I had been lecturing at Wellington College, and I ventured the opinion that a careful search might be rewarded by rediscovering the smooth snake in the locality. It was not very long before Mr. Blundell was able to report to me that a specimen had been taken, and he enclosed some photographs of the specimen, which are here reproduced. One cannot help surmising from this that it is quite possible that the smooth snake may be more common than we know, but as field naturalists do not often undertake a detailed search for snakes, it might easily escape observation. Labourers and those whose work takes them to snaky districts doubtless destroy any specimens encountered, under the impression that this snake is an adder.



THE PREHENSILE TAIL.



SMOOTH SNAKE IN MOTION.

A very slight investigation, however, would prevent an observer making such a mistake. In the place of the dark zigzag line along the middle of the back, which is the prominent marking of the adder, there are two rows of irregular spots placed laterally, but these are not nearly so conspicuous as the markings of the adder, except immediately after the process of sloughing. The spots are more prominent near the head. In size the smooth snake reaches 2ft. in adult females, but most specimens are somewhat smaller than this.

The smooth snake feeds mainly upon lizards, especially, apparently, the sand-lizard. Its bite is perfectly harmless, but a good many specimens are bad-tempered in captivity. Its mode of reproduction is viviparous, the family of young numbering as many as twelve. It has a curious habit of clinging on to anything with its mouth, and will allow itself to be carried about on a stick in that way. The tail also is used as an organ of prehension, which is very well seen in one of Mr. Blundell's photographs appended. Another shows the eye-scale just before sloughing takes place. An attack on a lizard is shown in a third, and the very graceful curves when the snake is in motion on the grass are well brought out in the other illustrations.

"The favourite haunt of coronella is a dry, sandy hillside, overgrown with short heath and gorse and coarse grass, and sloping down to a marshy valley where water is at all times obtainable. There, on some bare patch of sand, the snake lies, loosely coiled, and basks in the sun, and where it can, when thirsty, get water without any great expenditure of energy. Among the undergrowth it can at any time find its prey. As soon as it sees its victim within easy reach, it slowly approaches, keeping its body concealed, but slightly raising its head above the heather and coarse grass. When it gets within striking distance, after remaining motionless for a few seconds it darts suddenly, and with the quickness of thought, at the throat of the hapless lizard. If its aim is successful the snake instantly grasps with its tail a stem of heather or a tuft of grass, and proceeds at once to the enjoyment of its meal. Its first step is to gradually shift its hold from the throat to the snout of the lizard, by slow and almost imperceptible degrees. When

once it has the lizard's head fairly in its jaws the process of swallowing is fairly rapid, and the strong protests of the victim are wholly unavailing, as the snake, with its tail knotted round the grass, is able to overcome all resistance. In this way it will in five or ten minutes entirely dispose of a lizard as large round as itself and two-thirds of its own length. After its meal the snake is somewhat sluggish, and disinclined to exert itself; but in about a fortnight it begins to recover its appetite, and by the end of another week is again actively engaged in its search for food." The foregoing graphic description is from the pen of Mr. Baldry, whom I mentioned as having recorded the occurrence of the smooth snake in great abundance in the neighbourhood of Bournemouth. I am afraid that as time goes on it is only too probable that this rarest of English snakes will become even more of a curiosity than it is at the present day.

GERALD LEIGHTON.

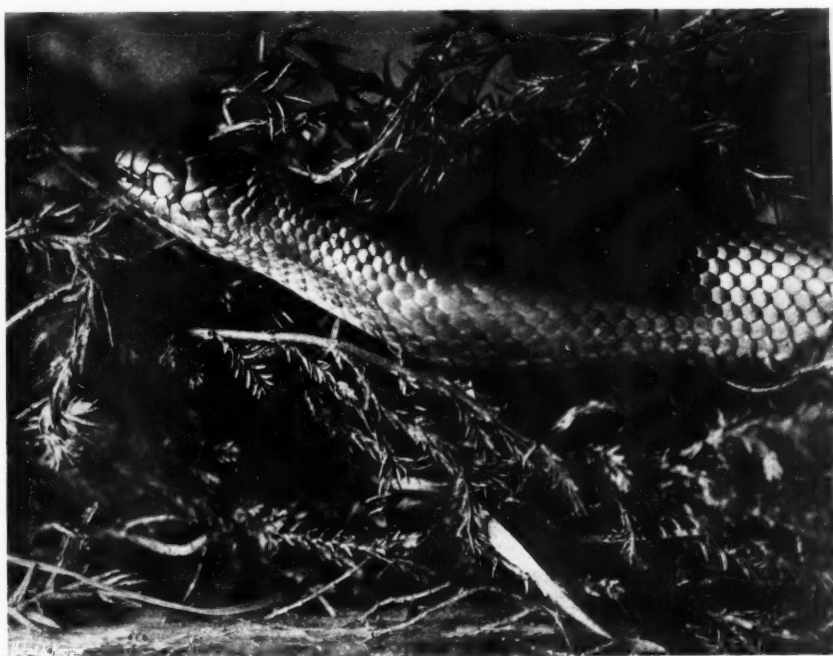
FROM THE FARMS.

OUTGOING VALUATION.

IN some sheep-farming parts of the country, and especially on the West Coast of Scotland, a situation of no little difficulty arises from the custom of the incoming tenant, or, failing him, the landlord, taking over the sheep of the outgoing tenant at a valuation that seems always to be made in the tenant's interest. The idea is that the valuation shall be based on the market value, increased by a shilling or two for "acclimatisation," as it is called—that is to say, for the additional value put on the sheep on a certain hill by the fact that they have become habituated to it. The principle of this increment is that fresh sheep put on the same ground would not thrive so well, and there is justice in this. There is hardly justice, however, in the valuation of nearly 50s. a head that is sometimes put on the sheep by the valuers. The disproportionate value has this effect: the landlord is the man who has to take over the sheep at this figure, for no tenant would take the farm stocked at such a price. At the end of his lease the outgoing tenant puts on the ground as many sheep as it will possibly carry—a number that is distinctly injurious to it—in order to get this over-valuation for them; or, if he wishes to renew, he tells his landlord that a reduction must be made in his rent, or else he will throw up the farm and demand this over-large value for his stock. Thus a pistol is pointed at the landlord's head. Why more appeals against the valuations have not been made is not clear; but probably the expense of the requisite legal operations is a sufficient deterrent.

FENCES AND HEDGES.

This is the title of an instructive article in the Journal of the Board of Agriculture by Mr. Thomas Berwick. He expresses



SHOWING EYE-SCALE BEFORE SLOUGHING.

a well-grounded regret that parts of the country are now practically denuded of thorn hedges, whereas a little timely assistance on the part of the landlord and the tenant might have preserved many good thorn fences. It is easy to let them go wrong, but it is difficult to replace them; and we have to remember that it takes from ten to fifteen years to rear a thorn hedge strong enough to turn heavy stock. Fences that have to act as

boundaries between two estates, or two farms, ought to be thoroughly well kept up, as their being so will often obviate causes of annoyance. The reasons for the decay of thorn hedges are many. One is the difficulty of growing cereals to advantage, which has had the effect of causing much land to be laid down in grass, and in many cases of several fields being thrown together. Where this has happened the thorn hedges have been left to grow as they liked, with the consequence that the bushes have sprouted up into tall trees of some use as shelter, but of none at all as boundaries, as a thorn bush if allowed to grow upwards soon loses its bottom foliage. Then, again, fences have suffered from the general carelessness which resulted from low profits and shortness of labour. As a rule farm labourers are bad hedgers. Hares and rabbits are also enemies of the hedge, as they bark their stems. Sometimes the injury is so great that the bushes have to be cut over close to the ground and treated as a newly-planted hedge for several years before they are fit for their purpose again. Trees are, undoubtedly, very picturesque in hedgerows, but they cause gaps by their shade and exhaustion of the soil. Cattle also gather under them, and do considerable harm by baring the roots.

CO-OPERATION IN INSURANCE.

If small holdings are to be increased, those who take them should be earnestly advised to get into touch with one another

HOW TO START BEE-KEEPING.

In the official journal Mr. T. I. Weston gives some very interesting instructions to those who are about to begin bee-keeping. He first of all advises the would-be apiarian to purchase a trustworthy book on the subject, such as that written by Mr. Cowan, the president of the Bee-keepers' Society. In the next place it would be advantageous for him to make the acquaintance of someone who keeps bees, who would put him up to the use of the technical terms. And in this connection it is well to remember that nearly every county has its own association, the secretaries of which are only too glad to furnish the name of expert bee-keepers who are willing to render assistance. The list of apparatus required is as follows: Black net veil; smoker, for subduing bees; wax comb foundation (brood and super); bottle-feeder; section boxes; frame-hive, fitted with brood-foundation in ten or twelve standard frames, two division boards, section-rack or lift of shallow frames, a queen excluder and quilts. If the hive is to be worked for extracted honey, a centrifugal honey-extractor will also be needed. Additional useful articles are: Scraper-knife, for cleaning floor-boards, frames, etc.; comb-uncapping knife, for use when extracting; a straw skep, for taking swarms; spare coverings of felt or carpet; a super-clearer, for clearing bees from section racks or supers. The swarm to commence with ought to be a



R. Demachy.

A FRENCH PASTURE.

Copyright

for the purpose of forming clubs. In Lincolnshire several of these exist already. At Moulton Chapel, between Boston and Spalding, there is a Cow Club, established in 1884, and which has flourished ever since, possessing at the present time greater membership than ever. It was formed "for the purpose of assisting each other in acts of benevolence when overtaken by misfortune." The entrance fee is 2s. 6d. for the first cow, and 1s. for each subsequent one, and the funds at the disposal of the club amount to about £300. Of pig clubs there are many in existence, and they are conducted on lines very similar to those we have sketched. One of the most successful is that of St. Nicholas and Holy Trinity, near Boston. It has been established ten years, and has a total membership of 135, with 217 pigs insured. In the course of the last twelve months fifteen claims were paid, amounting in the aggregate to £39 2s. 1d. The increase in the number of allotments for cottagers and labourers has caused a corresponding increase in the membership of the Pig Club—a sure proof of its being wanted. Those who are starting as small holders should make themselves acquainted with the working of such a scheme, which will help them in tiding over the loss of horse or cow which otherwise may overwhelm them.

first one of the present year, as by this means the purchaser will avoid all the pitfalls of disease or lack of condition, of which he has to beware when he buys second-hand stocks. The principles to be followed, after the tyro has once got his bees going, are thus plainly set forth: A colony of bees consists of a queen, a large number of worker-bees, and (during summer) a certain proportion of drones. The strength of a healthy stock depends on the vigour and laying power of the queen, who is at her best in her second season, *i.e.*, a queen hatched in June, 1904, is at her best in May, 1905, and should be replaced by a young one in 1906, either by natural swarming or by re-queening. Queens may be purchased, or raised by the methods taught in text-books. The economy of a hive consists, first, in the keeping up of the warmth of the brood nest (by means of the heat evolved from the bodies of the clustering bees) to such a point as will stimulate the queen to lay eggs, and will enable young bees to be reared; secondly, in the feeding of the queen, and nursing of the brood, and cleansing the cells for the queen's use; thirdly, in the obtaining of pollen, water, and nectar for the brood; lastly, in the building of storage combs and collecting nectar for the future supplies of honey.

CORRESPONDENCE.

KESTRELS.

[TO THE EDITOR OF "COUNTRY LIFE."]

SIR,—In your Christmas Number for 1903 you were good enough to insert an account of the recapture of the kestrel Rugby, that I had as a nestling in 1901, and which, after letting him go in the end of that year, I had recaptured twice, at intervals of about twelve months between. He, in the meantime, had paired and brought up two nests of young ones. Last July he again had a nest, about a mile from here, up the Rholben. A country lout shot the female as she was bringing food to the nest, and then robbed the nest of four young. Three of these he brought to me for sale. As they were only a week old they were of no use to anyone, even if they had been other than kestrels! It was only on the youth assuring me that he had not shot the male bird—Rugby—with his bell on, that I spared him a painful interview and



FIDDLES.

dilapidated, but his wings are passable. Rugby is still about, but too wild to be recaptured again. Fiddles is easily taken up by myself, but wild enough when anyone else attempts it.—ROBERT GARDNER.

DOUBLE CUCKOO-FLOWER.

[TO THE EDITOR.]

SIR,—I enclose a photograph of the *Cardamine pratensis*—cuckoo-flower, or ladies' smock—in the forms in which it is growing here on the Mendip Hills, in Somerset. The flower to the right is the ordinary single kind; that to the left a fair average example of the double blossom, and the centre spike is the flower arriving at the "hose-in-hose" stage. This latter is a development of some of the double flowers, the middle pushing forward after a day or two, and making a second flower at the end of a short stalk. The double variety is almost more common than the single in many places in this neighbourhood, and makes a fine effect when growing in large clumps.—E. H.

PIGEON-SHOOTING.

[TO THE EDITOR.]

SIR,—The decision to discontinue pigeon-shooting at Hurlingham is one more very big nail in the coffin of field sports, since its abolition is, undoubtedly, one important preliminary to that total extinction of shooting, hunting, and fishing which is so keenly desired by the apostles of "advanced thought." It is useless to deny that some measure of pain is occasionally involved in both sports and athletic games; but this is, for obvious reasons, greatly exaggerated by ultra-sentimental humani-

tarians, who refuse to realise that a pheasant, winged, and falling from a height of 50ft. or 60ft. odd, is often able to run swiftly for a considerable distance, whereas, a human being falling the same distance, and with a broken arm, would scarcely be able to move, even if conscious, which would, I imagine, hardly be probable. From this and many other such experiences of the behaviour of wounded game, it seems only reasonable to infer that man is far more sensitive than the lower animals. The frequent apologies and expressions of concern, offered by some sportsmen, for causing transitory pain, argue a somewhat feminine sentimentalism not un-mixed with cant. Such people should exchange game-shooting for clay-bird practice, and, furthermore, to be consistent, should also abjure animal food and ripe cheese. In course of time they would avoid boiling water because of the undoubted pain and discomfort caused to animalculæ. The irritating inconsistency so persistently shown by certain humanitarians only proves the utter impossibility of ever really preventing, by law, one hundredth part of the unavoidable pain which must be the inheritance of all living creatures, and until we abolish the wholesale slaughter of innocent human beings for political purposes, it is childish sentimentalism and unreasonable to make trouble and cause vexation because of the shooting of pigeons or the chasing of rabbits. Those who steadfastly stand by the Bible and its teaching have no honest case against the shooting and chasing of animals or the catching of fish, since these pursuits are favourably mentioned in both the Old and New Testaments. No, vote catching, jealousy, and covetousness have far more to do with the desire to hamper and do away with sport, in Great Britain and Ireland, than *bonâ-fide* religion. The extinction of field sports will be greatly helped by the foolish apathy of the trades connected with their numerous requirements. The persistent energy of the enemy is far greater in its attack than is that of the devotee in his defence of sport.—LEUIS HERVEY D'EGVILLE.



RUGBY.

[Our correspondent's alarm is exaggerated. Shooting birds let loose from a trap is scarcely sport in the true sense, though we agree that when well managed it is not cruel.—ED.]

THE HOUSE-MARTIN.

[TO THE EDITOR.]

SIR,—It is delightfully refreshing to find at this busy season someone writing to call the attention of a somewhat too apathetic public to the sad lessening, or absolute decline, of the numbers of this beautiful family of our English migratory birds, the swallow-tribe; and this neglect, too, in the absolute face of their wonderful usefulness to man. As far as my own observation takes me, I find no diminution in the quantity of the swallow itself. For years I have had but three pairs breeding here, and these arrived on April 2nd, and are now nesting. But, alas! a number of places where the house-martin congregated and hung their nests about houses, stabling, outbuildings, and walls, now know their presence no longer. In many localities the nests are there, but are full of that detestable pest, the sparrow. The martins have been driven off and their home appropriated, and this, far too often, is the result of supine idleness; no effort being made to dispossess this avian robber of his ill-gotten gain. It is this, I believe, that largely contributes to the loss and death of so many of this bird. Let me entreat those who have the opportunity to aid, in preventing the rightful owners, the martins, from



DOUBLE CUCKOO-FLOWER.



being driven off by the baleful combative sparrow. Here, when I first came about five years ago, I found wire had been placed about the eaves of my house. This I had removed just before the time the martins arrived about the village, and to my infinite pleasure three or four pairs immediately began to build. Next year it was the same, with further additions, and the mosquitoes, though fewer, were still very troublesome. Another season, and the martins cleared off much of our ephemeral insect-life, and in all ways added much to the happiness of our country life. But then came the battle. The sparrows got into the nests and kept possession, and the martins were powerless. So I got men to bring ladders and go up, out-turning the sparrows; but it was almost futile, for they came again and again. Still, perseverance gained the day, and the martin colony was left in peace. This year the battle is renewed. The robbers, though expelled at night, are there again in the morning. Yet I hope and trust they will be cleared off at last, and my much-valued martins left in peace. If all naturalists would help in this, I believe, laudable object, when able, I think it would greatly increase the well-being of these most useful and delightful birds.—HARRISON WEIR, F.R.H.S.

AN ALIEN FROG.

[TO THE EDITOR.]

SIR,—Perhaps the following incident may interest some of your readers. In the spring of 1899, a green frog was brought over to Warwickshire from Bordighera, and placed in a heated conservatory opening out of the drawing-room, where it lived during the winter. In the summer it was missed, and supposed to be dead, but later on was heard croaking loudly every evening by a pool which was separated from the house by a large meadow. To get to the pool the frog had to go round the house before reaching the meadow. It stayed in the pool all the summer, but when the weather began to get colder it returned to its original abode—the conservatory. One of the gardeners found a little wet track one morning leading from the door to an orange tree, on one of the branches of which was the frog! The two following summers it spent at the pool; returning to the house for the winter, but in 1901 it was found dead in the conservatory, soon after its return in the autumn. While down at the pool it croaked so loudly that the village people heard it, and wondered what strange new pet "the gentry up at the 'All" had got.—T. BARRETT.

THE MIGRATING ANTS.

[TO THE EDITOR OF "COUNTRY LIFE."]

SIR,—Gamage's entomologist writes that the ants he sent us were yellow, not red ants, and that what I called eggs were the babies or larvæ of various sizes. These larvæ were growing daily, apparently under the mesmerising of the other ants. A large portion were always seen making passes over, or licking or breathing upon, these small larvæ all day long. Others were carrying about the larvæ, apparently classifying them, and placing them according to their size in different parts of the nest. The young ants could be seen through a magnifier inside the cocoon or case in which they were enclosed. About a week before all this had been going on in full vigour; but when we opened the nest we found nothing alive in the nest but one small domestic. There were some shrivelled-up dried things that rattled. I imagine now that these were the larvæ that had not hatched out, and that the others must have gone with the rest of them as soon as they were freed from their case or cocoon. It is quite certain the ants could not have carried them away up 4ft. of wall and through a window that when shut would only admit an envelope to pass under it.—N.

OLD SILVER RACING BELLS.

[TO THE EDITOR OF "COUNTRY LIFE."]

SIR,—In reference to the article in your issue of April 29th on the old silver bells at Paisley, and the arms on the larger bell, which are said to be unidentified, the following extract from Lord Bute's work on the arms of the

Royal Burghs of Scotland may be of interest: "In Brown's History of Paisley Grammar School, founded by James VI., in 1576, is figured a carved stone, dated 1586, bearing what he styles the Paisley coat of arms, and which is so referred to in a letter of 1813, quoted by him. This coat appears to be an attempt to combine the arms of the House of Stewart, the founders of the Abbey, with those of the family of Hamilton, in whom the Abbey had become almost hereditary before the Reformation, and we should read the coat, gules a fess checking, argent and azure, between three cinquefoils, ermine." From the above it seems clear that the arms on the bell are intended for those of the town of Paisley (though a different coat is now used on the burgh seal), and I would suggest that the initials O.P. on the bell stand for Oppidum (de) Paisley.—R. G. W.

OLD BRIDGE AT CASTLE COOMBE.

[TO THE EDITOR OF "COUNTRY LIFE."]

SIR,—The old bridge at Castle Coombe, which crosses the trout stream, is one which will catch the eye of the most casual passer-by. It is of very low build, with three spans, constructed of rough stone, more the kind of bridge, in fact, that one usually associates with Dartmoor and its environment. From a picturesque point of view one could not possibly find an example that would be more in keeping with the old-world atmosphere of this charming village.—S. E. C. MORRIS.

THE BITER BIT.

[TO THE EDITOR OF "COUNTRY LIFE."]

SIR,—Through a small hole in the wire-netting that divides the field from the lawn, came every morning a weasel in search of food for its young. Its long lithe body could be seen moving this way and that, its eager face uplifted, scenting danger from afar or peering after its prey. Disappearing beneath some large leaf or overhanging bough it waited, then, suddenly darting from its hiding-place, it jumped high into the air in, oftentimes, a vain endeavour to catch the small unwary bird that rose in frightened alarm from its interrupted diet of worms. After a successful marauding expedition its return journey was fraught with difficulties, for the hole in the wire being too small to admit both it and its burden, the latter had to be laid down close to the fence while the weasel squeezed itself through. Then the little pointed face might be discerned inserted back again, the game quickly picked up and dragged after it. Watching from the bedroom window this scene being re-enacted morning after morning, made dressing a somewhat prolonged pleasure, and "late again for breakfast" the usual matutinal greeting. Now there is no need for the reproof; the picture tells its own tale; the weasel is dead. A puff of smoke rose suddenly from the shrubbery, the quick report of a gun rang out in the still air, and stretched upon the lawn lay the weasel, holding firmly between its teeth the still warm but lifeless body of a mouse.—EDITH BROUGHTON.

CURIOUS NEST.

[TO THE EDITOR OF "COUNTRY LIFE."]

SIR,—The accompanying photograph shows a nest on the moor here (Cardross), the eggs being four pheasant and seven grouse. The birds laid an egg each alternately, till each had four in the nest. Then the pheasant ceased and the grouse laid three more, and is now sitting on the lot. Within 200yds. there is a second nest containing seven pheasant eggs and seven grouse, one of the latter birds sitting on them. These nests are within rooyds. of a large wood adjoining the moor. The publication of the photograph would, I think, be interesting to many of your readers. It was taken by Mr. S. Turnbull of Rahane.—M. B.

